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RIJKSOPSPORING VAN DELFSTOFFEN  
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MITTEILUNGEN DER STAATLICHEN BOHRVERWALTUNG  
IN DEN NIEDERLANDEN

MÉMOIRES DU SERVICE DES EXPLORATIONS MINIÈRES  
DE L'ÉTAT DES PAYS-BAS

MEMOIRS OF THE GOVERNMENT INSTITUTE FOR THE GEOLOGICAL  
EXPLORATION OF THE NETHERLANDS



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**FLORA**  
OF THE  
**CARBONIFEROUS** <sup>OF</sup> <sub>THE</sub> **NETHERLANDS**  
AND  
**ADJACENT REGIONS**

BY  
Dr. W. J. JONGMANS

VOL. I

**A MONOGRAPH OF THE CALAMITES**  
**OF WESTERN EUROPE**

BY  
Dr. R. KIDSTON, F. R. S. L. AND E., F. G. S. AND Dr. W. J. JONGMANS

**ATLAS**  
**PLATE 1—158**

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UITGEGEVEN OP LAST VAN HET MINISTERIE VAN LANDBOUW, NIJVERHEID EN HANDEL

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's-GRAVENHAGE 1915



GEDRUKT DOOR  
T KASTEEL VAN  
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AMSTERDAM

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## PROVISIONAL EXPLANATION OF FIGURES <sup>1)</sup>.

(A MORE DETAILED ONE WILL BE ISSUED IN THE VOLUME OF TEXT).

*Pl. 1, fig. 1; Pl. 2, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 3, 4, 5 . . . . .	C. undulatus Sternb.
*Pl. 6, fig. 1, 2. . . . .	C. undulatus Sternb.
*Pl. 6, fig. 3, 4, 5. . . . .	C. undulatus Sternb.
*Pl. 6, fig. 6; Pl. 7, fig. 1 . . . . .	C. undulatus Sternb.
Pl. 7, fig. 2; Pl. 8 . . . . .	C. undulatus Sternb.
*Pl. 9, fig. 1, 2, 3; Pl. 10, fig. 1, 2 . . . . .	C. undulatus Sternb.
*Pl. 9, fig. 4; Pl. 32, fig. 3, 4. . . . .	C. undulatus Sternb.
Pl. 9, fig. 5 . . . . .	C. undulatus Sternb.
*Pl. 10, fig. 1, 2; Pl. 9, fig. 1, 2, 3 . . . . .	C. undulatus Sternb.
Pl. 10, fig. 3 . . . . .	C. undulatus Sternb.
*Pl. 10, fig. 4, 5 . . . . .	C. undulatus Sternb.
Pl. 11, fig. 1 . . . . .	C. undulatus Sternb.
*Pl. 11, fig. 2; Pl. 12, fig. 1 . . . . .	C. undulatus Sternb.
*Pl. 12, fig. 1; Pl. 11, fig. 2 . . . . .	C. undulatus Sternb.
Pl. 12, fig. 2; Pl. 13, 14, 15, 16. . . . .	C. undulatus Sternb.
*Pl. 17, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 18 . . . . .	C. undulatus Sternb.
*Pl. 19, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 19, fig. 3; Pl. 20; Pl. 21, fig. 1. . . . .	C. undulatus Sternb.
*Pl. 21, fig. 2; Pl. 22, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 23 . . . . .	C. undulatus Sternb.
*Pl. 24, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 24, fig. 3 . . . . .	C. undulatus Sternb.
Pl. 24, fig. 4 . . . . .	Calamostachys ramosa Weiss.
*Pl. 25, fig. 1; Pl. 26, fig. 1 . . . . .	C. undulatus Sternb.
*Pl. 25, fig. 2, 3, 4; Pl. 26, fig. 2 . . . . .	C. undulatus Sternb.
*Pl. 26, fig. 1; Pl. 25, fig. 1 . . . . .	C. undulatus Sternb.
*Pl. 26, fig. 2; Pl. 25, fig. 2, 3, 4 . . . . .	C. undulatus Sternb.
Pl. 26, fig. 3, 4; Pl. 27, fig. 1 . . . . .	C. undulatus Sternb.
*Pl. 27, fig. 2, 3 . . . . .	C. undulatus Sternb.
Pl. 27, fig. 4; Pl. 28, fig. 1, 2 . . . . .	C. undulatus Sternb.
*Pl. 28, fig. 3; Pl. 29, fig. 1 . . . . .	C. undulatus Sternb.
Pl. 29, fig. 2 . . . . .	C. undulatus Sternb.
Pl. 29, fig. 3 . . . . .	C. species (cf. C. wedekindi Weiss).
*Pl. 30, fig. 1, 2 . . . . .	C. undulatus Sternb.
Pl. 30, fig. 3, 4, 5 . . . . .	C. undulatus Sternb.

<sup>1)</sup> Those marked with an asterisk, belong to one specimen.



*Pl. 31, fig. 1, 2 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 31, fig. 3 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 31, fig. 4 . . . . .	<i>C. species.</i>
Pl. 31, fig. 5; Pl. 32, fig. 1, 2 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 32, fig. 3, 4; Pl. 9, fig. 4. . . . .	<i>C. undulatus</i> Sternb.
*Pl. 33, fig. 1, 2 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 33, fig. 3, 4 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 34, fig. 1, 2, 3 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 34, fig. 4; Pl. 35, fig. 1, 2 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 35, fig. 3, 4; Pl. 36, fig. 1, 2 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 36, fig. 3, 4; Pl. 38, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 36, fig. 5; Pl. 37, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 38, fig. 1; Pl. 36, fig. 3, 4 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 38, fig. 2 . . . . .	<i>C. species</i> (cf. <i>semicircularis</i> Weiss).
Pl. 38, fig. 3 . . . . .	<i>C. species.</i>
Pl. 39, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
*Pl. 39, fig. 2, 3 . . . . .	<i>C. suckowi</i> Bgt.
Pl. 39, fig. 4 . . . . .	<i>C. cf. infractus</i> Gutbier.
*Pl. 40, fig. 1, 2 . . . . .	<i>C. roemeri</i> Goepfert.
Pl. 40, fig. 3 . . . . .	<i>C. wedekindi</i> Weiss.
Pl. 40, fig. 4 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 41, fig. 1, 2, 3 . . . . .	<i>C. carinatus</i> Sternb. var. <i>rugosus</i> Kidston et Jongmans.
Pl. 41, fig. 4 . . . . .	<i>C. wedekindi</i> Weiss.
*Pl. 42, fig. 1, 2 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 42, fig. 3, 4 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 42, fig. 5 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 43, fig. 1; Pl. 44, fig. 4; Pl. 45, fig. 1 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 43, fig. 2, 3 . . . . .	<i>C. wedekindi</i> Weiss.
Pl. 43, fig. 4 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 43, fig. 5 . . . . .	<i>C. wedekindi</i> Weiss.
Pl. 44, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 44, fig. 2, 3 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 44, fig. 4; Pl. 43, fig. 1; Pl. 45, fig. 1 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 45, fig. 1; Pl. 43, fig. 1; Pl. 44, fig. 4 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 45, fig. 2, 3; Pl. 46, fig. 1, 2 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 46, fig. 3, 4 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 47, fig. 1 . . . . .	<i>C. roemeri</i> Goepfert.
*Pl. 47, fig. 2, 3 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 47, fig. 4, 5 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 47, fig. 6 . . . . .	<i>C. semicircularis</i> Weiss.
*Pl. 47, fig. 7; Pl. 48, fig. 1; Pl. 50, fig. 5 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 48, fig. 2 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 48, fig. 3 . . . . .	<i>C. vaginatus</i> Zeiller.
Pl. 48, fig. 4 . . . . .	<i>C. ohlsbachensis</i> Sterzel.
Pl. 49, fig. 1 . . . . .	<i>C. semicircularis</i> Weiss.
Pl. 49, fig. 2 . . . . .	<i>C. ohlsbachensis</i> Sterzel.
*Pl. 49, fig. 3, 4 . . . . .	<i>C. ohlsbachensis</i> Sterzel.
*Pl. 49, fig. 5, 6, 7 . . . . .	<i>C. ohlsbachensis</i> Sterzel.

*Pl. 50, fig. 1, 2 . . . . .	<i>C. dictyoderma</i> Kidston et Jongmans.
*Pl. 50, fig. 3, 4 . . . . .	<i>C. species</i> (Bulbils).
Pl. 50, fig. 5; Pl. 47, fig. 7; Pl. 48, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 50, fig. 6 . . . . .	<i>Equisetites species</i> .
Pl. 50, fig. 7 . . . . .	<i>Equisetites zaeformis</i> Schloth.
Pl. 51, fig. 1 . . . . .	<i>C. undulatus</i> Sternb.
Pl. 51, fig. 2 . . . . .	<i>C. verticillatus</i> L. et H.
*Pl. 51, fig. 3, 4 . . . . .	<i>C. goepperti</i> Ett.
*Pl. 52, fig. 1, 2 . . . . .	<i>C. species</i> ( <i>C. verticillatus</i> Zeiller).
Pl. 52, fig. 3 . . . . .	<i>C. verticillatus</i> L. et H.
*Pl. 52, fig. 4, 5 . . . . .	<i>C. verticillatus</i> L. et H.
Pl. 52, fig. 6; Pl. 52, fig. 7 . . . . .	<i>C. verticillatus</i> L. et H.
Pl. 52, fig. 8 . . . . .	<i>C. vaginatus</i> Zeiller.
*Pl. 53, fig. 1, 2 . . . . .	<i>C. goepperti</i> Ett.
Pl. 53, fig. 3; Pl. 54, fig. 1 . . . . .	<i>C. goepperti</i> Ett.
*Pl. 54, fig. 2, 3; Pl. 55, fig. 1 . . . . .	<i>C. goepperti</i> Ett.
Pl. 55, fig. 2, 3, 4 . . . . .	<i>C. goepperti</i> Ett.
Pl. 55, fig. 5 . . . . .	<i>C. species</i> ( <i>C. varians inversus</i> Weiss).
Pl. 56, fig. 1, 2, 3, 4 . . . . .	<i>C. goepperti</i> Ett.
*Pl. 56, fig. 5, 6; Pl. 57, fig. 1, 2, 3 . . . . .	? <i>C. sachsei</i> Stur.
Pl. 57, fig. 4, 5, 6, 7; Pl. 58, fig. 1 . . . . .	<i>C. sachsei</i> Stur.
Pl. 58, fig. 2 . . . . .	<i>C. germanianus</i> Goeppert.
Pl. 58, fig. 3 . . . . .	<i>C. sachsei</i> Stur.
Pl. 58, fig. 4 . . . . .	<i>C. discifer</i> Weiss.
Pl. 59, fig. 1 . . . . .	<i>C. sachsei</i> Stur.
Pl. 59, fig. 2 . . . . .	<i>C. transversalis</i> Kidston et Jongmans.
Pl. 59, fig. 3 . . . . .	<i>C. bohemicus</i> Kidston et Jongmans.
Pl. 59, fig. 4 . . . . .	<i>C. pseudogermanianus</i> Kidston et Jongmans.
Pl. 60, fig. 1 . . . . .	<i>C. sachsei</i> Stur.
Pl. 60, fig. 2, 3 . . . . .	<i>C. sachsei</i> Stur.
*Pl. 61, fig. 1, 2 . . . . .	<i>C. sachsei</i> Stur.
Pl. 61, fig. 3 . . . . .	<i>C. goepperti</i> Ett.
Pl. 61, fig. 4 . . . . .	<i>C. discifer</i> Weiss.
Pl. 62, fig. 1, 2 . . . . .	<i>C. sachsei</i> Stur.
Pl. 62, fig. 3 . . . . .	<i>C. discifer</i> Weiss.
Pl. 62, fig. 4; Pl. 63, fig. 1, 2, 3 . . . . .	<i>C. brittsii</i> White.
*Pl. 63, fig. 4, 5 . . . . .	<i>C. sachsei</i> Stur.
Pl. 63, fig. 6 . . . . .	<i>C. sachsei</i> Stur.
Pl. 64 . . . . .	<i>C. pseudogermanianus</i> Kidston et Jongmans.
Pl. 65, fig. 1 . . . . .	<i>C. goepperti</i> Ett.
Pl. 65, fig. 2 . . . . .	<i>C. discifer</i> Weiss.
*Pl. 65, fig. 3, 4, 5 . . . . .	? <i>C. brittsii</i> White.
Pl. 66, fig. 1, 2, 3 . . . . .	<i>C. goepperti</i> Ett.
Pl. 66, fig. 4 . . . . .	<i>C. sachsei</i> Stur.
Pl. 66, fig. 5 . . . . .	<i>C. carinatus</i> Sternb.
Pl. 66, fig. 6; Pl. 67, fig. 1 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 67, fig. 2, 3 . . . . .	<i>C. discifer</i> Weiss.
Pl. 68, fig. 1 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.

Pl. 68, fig. 2 . . . . .	<i>C. schützeiformis intermedius</i> Kidston et Jongmans.
Pl. 68, fig. 3 . . . . .	<i>C. discifer</i> Weiss.
Pl. 68, fig. 4, 5 . . . . .	<i>C. pseudogermanianus</i> Kidston et Jongmans.
Pl. 69, fig. 1 . . . . .	<i>C. deltenrei</i> Kidston et Jongmans.
Pl. 69, fig. 2 . . . . .	<i>C. germanianus</i> Goeppert.
Pl. 69, fig. 3 . . . . .	<i>C. vandergrachti</i> Kidston et Jongmans.
* Pl. 69, fig. 4; Pl. 70, fig. 1, 5 . . . . .	<i>C. vandergrachti</i> Kidston et Jongmans.
* Pl. 70, fig. 2, 3, 4 . . . . .	<i>C. vandergrachti</i> Kidston et Jongmans.
* Pl. 71, fig. 1, 2 . . . . .	<i>C. species</i> (? <i>C. germanianus</i> Goeppert).
Pl. 71, fig. 3 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
Pl. 71, fig. 4, 5; Pl. 72 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
* Pl. 73, fig. 1, 2 . . . . .	<i>C. schützeiformis intermedius</i> Kidston et Jongmans.
Pl. 73, fig. 3, 4 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
Pl. 73, fig. 5 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
* Pl. 74, fig. 1; Pl. 75, fig. 1, 2 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
* Pl. 74, fig. 2, 3 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
Pl. 74, fig. 4 . . . . .	<i>C. species</i> ( <i>Phragma</i> ).
* Pl. 75, fig. 1, 2; Pl. 74, fig. 1 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
* Pl. 76, fig. 1, 2 . . . . .	<i>C. schützei</i> Stur.
Pl. 76, fig. 3 . . . . .	<i>C. schützeiformis intermedius</i> Kidston et Jongmans.
Pl. 76, fig. 4, 5, 6 . . . . .	<i>C. species</i> ( <i>Phragmata</i> ).
* Pl. 77, fig. 1, 2 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
* Pl. 77, fig. 3, 5 . . . . .	<i>C. species</i> ( <i>Bulbils</i> ).
Pl. 77, fig. 4 . . . . .	<i>C. species</i> ( <i>Bulbils</i> ).
Pl. 78, fig. 1 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
Pl. 78, fig. 2 . . . . .	<i>C. discifer</i> Weiss.
Pl. 78, fig. 3 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
* Pl. 78, fig. 4, 5 . . . . .	<i>C. species</i> ( <i>Bulbils</i> ).
* Pl. 78, fig. 6, 7 . . . . .	<i>C. species</i> ( <i>Bulbils</i> ).
Pl. 79, fig. 1, 2 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
* Pl. 79, fig. 3, 4 . . . . .	<i>C. schützeiformis waldenburgensis</i> Kidston.
* Pl. 80, fig. 1, 2 . . . . .	<i>C. schützeiformis typicus</i> Kidston et Jongmans.
Pl. 80, fig. 3, 4 . . . . .	<i>C. species</i> ( <i>Phragmata</i> ).
* Pl. 80, fig. 5, 6 . . . . .	<i>C. species</i> ( <i>Bulbils</i> ).
Pl. 81, fig. 1 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 81, fig. 2, 3 . . . . .	<i>C. schützei</i> Stur.
Pl. 81, fig. 4 . . . . .	<i>C. goepperti</i> Ett.
* Pl. 82, fig. 1, 2, 3 . . . . .	<i>C. suckowi</i> Bgt.
Pl. 83, fig. 1, 2, 3; Pl. 84, 85; Pl. 86, fig. 1 . . . . .	<i>C. suckowi</i> Bgt.
* Pl. 86, fig. 2, 3 . . . . .	<i>C. suckowi</i> Bgt.
Pl. 87, fig. 1, 2, 3 . . . . .	<i>C. suckowi</i> Bgt.
Pl. 88, fig. 1 . . . . .	<i>C. steinhaueri</i> Bgt.
Pl. 88, fig. 2, 3; Pl. 89, fig. 1 . . . . .	<i>C. suckowi</i> Bgt.
* Pl. 89, fig. 2, 3 . . . . .	<i>C. suckowi</i> Bgt. ( <i>Rhizome</i> ).
Pl. 89, fig. 4, 5 . . . . .	<i>C. suckowi</i> Bgt. ( <i>Rhizome</i> ).
Pl. 90, fig. 1 . . . . .	<i>C. species</i> .
Pl. 90, fig. 2 . . . . .	<i>C. suckowi</i> Bgt.
Pl. 90, fig. 3 . . . . .	<i>C. gigas</i> Bgt.

*Pl. 90, fig. 4, 5 . . . . .	<i>C. gigas</i> Bgt.
Pl. 91, 92, 93 . . . . .	<i>C. gigas</i> Bgt.
Pl. 94, fig. 1, 2 . . . . .	<i>C. cisti</i> Bgt.
*Pl. 95, fig. 1; Pl. 99, fig. 2 . . . . .	<i>C. sachsei</i> Stur.
Pl. 95, fig. 2, 3 . . . . .	<i>C. cisti</i> Bgt.
*Pl. 95, fig. 4, 5 . . . . .	<i>C. cisti</i> Bgt.
Pl. 96, fig. 1, 2 . . . . .	<i>C. cisti</i> Bgt.
Pl. 96, fig. 3 . . . . .	<i>C. gigas</i> Bgt.
Pl. 96, fig. 4, 5 . . . . .	<i>C. species</i> (immature stem).
*Pl. 97, 98 . . . . .	<i>C. jubatus</i> L. et H.
Pl. 99, fig. 1 . . . . .	<i>C. jubatus</i> L. et H.
*Pl. 99, fig. 2; Pl. 95, fig. 1 . . . . .	<i>C. sachsei</i> Stur.
Pl. 99, fig. 3 . . . . .	<i>C. species</i> (tuberous stem).
Pl. 99, fig. 4 . . . . .	<i>C. species</i> (Phragma).
*Pl. 100, fig. 1, 2 . . . . .	<i>C. jubatus</i> L. et H.
Pl. 100, fig. 3 . . . . .	<i>Asterophyllites longifolius</i> Sternb.
Pl. 100, fig. 4 . . . . .	<i>C. species</i> (Phragma).
Pl. 100, fig. 5 . . . . .	<i>C. species</i> (Pith cast and vascular wedges).
*Pl. 101, fig. 1, 2, 3 . . . . .	<i>C. distachyus</i> Sternb.
*Pl. 102, fig. 1, 2, 3 . . . . .	<i>C. distachyus</i> Sternb.
*Pl. 103, fig. 1, 2 . . . . .	<i>C. schulzi</i> Stur.
Pl. 104, fig. 1 . . . . .	<i>C. schulzi</i> Stur.
*Pl. 104, fig. 2, 3 . . . . .	<i>C. arborescens</i> Sternb.
Pl. 104, fig. 4 . . . . .	<i>C. species</i> .
Pl. 104, fig. 5; Pl. 105 . . . . .	<i>C. carinatus</i> Sternb.
*Pl. 106, fig. 1, 3 . . . . .	<i>C. carinatus</i> Sternb.
Pl. 106, fig. 2, 4 . . . . .	<i>C. carinatus</i> Sternb.
Pl. 106, fig. 5 . . . . .	? <i>C. cisti</i> Bgt.
Pl. 107, fig. 1 . . . . .	<i>C. carinatus</i> Sternb.
*Pl. 107, fig. 2, 3 . . . . .	<i>C. renaulti</i> Kidston et Jongmans.
*Pl. 108, fig. 1, 2 . . . . .	<i>C. carinatus</i> Sternb.
Pl. 108, fig. 3, 4, 5 . . . . .	<i>C. paleaceus</i> Stur.
*Pl. 109, fig. 1, 2, 3 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 110, 111, 112; Pl. 113, fig. 1, 2 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 113, fig. 3, 4 . . . . .	<i>C. cruciatus</i> Sternb.
Pl. 114, fig. 1, 2 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 114, fig. 3 . . . . .	<i>C. cruciatus</i> Sternb.
Pl. 114, fig. 4; Pl. 115, fig. 1 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 115, fig. 2 . . . . .	<i>C. multiramis</i> Weiss.
*Pl. 116, fig. 1; Pl. 117, fig. 1 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 116, fig. 2 . . . . .	<i>C. paleaceus</i> Stur.
Pl. 116, fig. 3 . . . . .	<i>C. carinatus</i> Sternb. var. B.
*Pl. 117, fig. 1; Pl. 116, fig. 1 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 117, fig. 2 . . . . .	<i>C. cf. paleaceus</i> Stur.
Pl. 118, fig. 1 . . . . .	<i>C. carinatus</i> Sternb. var. A.
Pl. 118, fig. 2 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 119, fig. 1 . . . . .	<i>C. britannicus</i> Weiss.
*Pl. 119, fig. 2; Pl. 120, fig. 1 . . . . .	<i>C. multiramis</i> Weiss.

Pl. 120, fig. 2. . . . .	<i>C. multiramis</i> Weiss.
Pl. 121, fig. 1. . . . .	<i>C. cruciatus</i> Sternb.
*Pl. 121, fig. 2; Pl. 122, fig. 1 . . . . .	<i>C. cucullatus</i> Weiss.
Pl. 122, fig. 2. . . . .	<i>C. britannicus</i> Weiss.
*Pl. 122, fig. 3; Pl. 123, fig. 1, 2. . . . .	<i>C. multiramis</i> Weiss.
Pl. 122, fig. 4. . . . .	<i>C. multiramis</i> Weiss.
*Pl. 123, fig. 1, 2; Pl. 122, fig. 3 . . . . .	<i>C. multiramis</i> Weiss.
*Pl. 123, fig. 3, 4. . . . .	<i>C. multiramis</i> Weiss.
*Pl. 123, fig. 5; Pl. 124, fig. 2 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 124, fig. 1. . . . .	<i>C. multiramis elongatus</i> Gutbier.
*Pl. 124, fig. 2; Pl. 123, fig. 5 . . . . .	<i>C. multiramis</i> Weiss.
*Pl. 124, fig. 3; Pl. 125, fig. 1 . . . . .	<i>C. multiramis</i> Weiss.
Pl. 125, fig. 2; Pl. 126, 127; Pl. 128, fig. 1 . . . .	<i>C. multiramis</i> Weiss.
*Pl. 128, fig. 2; Pl. 129, fig. 1 . . . . .	<i>C. brongniarti</i> Sternb.
*Pl. 129, fig. 2, 3 . . . . .	<i>C. artisi</i> Renault.
Pl. 130, fig. 1, 2 . . . . .	<i>C. cruciatus</i> Sternb.
Pl. 130, fig. 3. . . . .	<i>C. cruciatus elongatus</i> Gutbier.
Pl. 131, fig. 1. . . . .	<i>C. cruciatus</i> Sternb.
*Pl. 131, fig. 2, 3. . . . .	<i>C. infractus</i> Gutbier.
Pl. 132, fig. 1. . . . .	<i>C. infractus</i> Gutbier.
Pl. 132, fig. 2. . . . .	<i>C. cf. infractus</i> Gutbier.
*Pl. 132, fig. 3, 4. . . . .	<i>C. elongatus</i> Renault.
Pl. 133, fig. 1. . . . .	<i>C. cf. infractus</i> Gutbier.
*Pl. 133, fig. 2, 3. . . . .	<i>C. multiramis elongatus</i> Gutbier.
Pl. 134, fig. 1. . . . .	<i>C. species</i> ( <i>Arthropitys parrani</i> G. E.).
*Pl. 135, fig. 1, 2. . . . .	<i>C. goepperti</i> Ett.
Pl. 135, fig. 3. . . . .	<i>Equisetites cf. vaujoli</i> Zeiller.
Pl. 136, fig. 1. . . . .	<i>C. goepperti</i> Ett.
*Pl. 136, fig. 2, 3. . . . .	<i>C. suckowi</i> Bgt.
Pl. 137, fig. 1, 2. . . . .	<i>C. suckowi</i> Bgt.
Pl. 137, fig. 3. . . . .	<i>C. undulatus</i> Sternb.
Pl. 138, fig. 1. . . . .	<i>C. suckowi</i> Bgt.
Pl. 138, fig. 2. . . . .	<i>C. germanianus</i> Goeppert.
Pl. 138, fig. 3. . . . .	<i>Equisetites goepperti</i> Ett.
Pl. 138, fig. 4. . . . .	<i>C. roemeri</i> Goeppert.
Pl. 139, fig. 1. . . . .	<i>C. typ. cruciatus</i> Sternb.
Pl. 139, fig. 2. . . . .	„ <i>Hippurites gigantea</i> ” L. et H.
Pl. 139, fig. 3. . . . .	<i>Equisetites species</i> .
Pl. 139, fig. 4, 5. . . . .	<i>C. species</i> .
Pl. 140, fig. 1, 2. . . . .	„ <i>Asterophyllites grandis</i> ” L. et H.
Pl. 141, fig. 1, 2, 3 . . . . .	<i>C. approximatifomis</i> Stur.
Pl. 141, fig. 4. . . . .	<i>C. ramifer</i> Stur.
*Pl. 141, fig. 5; Pl. 142, fig. 1 . . . . .	<i>C. ramifer</i> Stur.
*Pl. 141, fig. 6; Pl. 142, fig. 2 . . . . .	<i>C. cistiiformis</i> Stur.
*Pl. 142, fig. 1; Pl. 141, fig. 5 . . . . .	<i>C. ramifer</i> Stur.
*Pl. 142, fig. 2; Pl. 141, fig. 6 . . . . .	<i>C. cistiiformis</i> Stur.
Pl. 142, fig. 3. . . . .	? <i>C. cistiiformis</i> Stur.
Pl. 142, fig. 4. . . . .	<i>C. ramifer</i> Stur.



*Pl. 142, fig. 5, 6 (numbered on Plate fig. 2 right corner).	<i>C. haueri</i> Stur.
*Pl. 143, fig. 1, 2; Pl. 144, fig. 1	<i>C. ramifer</i> Stur.
*Pl. 143, fig. 3, 4	<i>C. haueri</i> Stur.
Pl. 143, fig. 5, 6	<i>C. roemeri</i> Goeppert.
Pl. 143, fig. 7	<i>C. cistiiformis</i> Stur.
*Pl. 144, fig. 1; Pl. 143, fig. 1, 2	<i>C. ramifer</i> Stur.
Pl. 144, fig. 2, 3	<i>C. haueri</i> Stur.
*Pl. 144, fig. 4; Pl. 145, fig. 1	<i>C. cistiiformis</i> Stur.
*Pl. 145, fig. 2, 3	<i>C. haueri</i> Stur.
Pl. 145, fig. 4	<i>C. haueri</i> Stur.
Pl. 145, fig. 5	<i>C. species</i> ( <i>C. ramifer</i> Zeiller, Héraclée).
Pl. 145, fig. 6	<i>C. cistiiformis</i> Stur.
Pl. 145, fig. 7; Pl. 146, fig. 1, 2	<i>C. haueri</i> Stur.
*Pl. 147, fig. 1, 2	<i>C. cistiiformis</i> Stur.
*Pl. 147, fig. 3, 4	<i>C. cistiiformis</i> Stur.
Pl. 147, fig. 5; Pl. 148, fig. 1	<i>C. taitianus</i> Kidston et Jongmans.
Pl. 148, fig. 2	<i>C. species</i> .
Pl. 149, fig. 1	<i>C. taitianus</i> Kidston et Jongmans.
*Pl. 149, fig. 2, 3, 4	<i>C. taitianus</i> Kidston et Jongmans.
Pl. 149, fig. 5	<i>C. taitianus</i> Kidston et Jongmans.
*Pl. 149, fig. 6; Pl. 150, fig. 1, 2	<i>Asterocalamites radiatus</i> Bgt.
*Pl. 150, fig. 3; Pl. 151, fig. 1	<i>Asterocalamites radiatus</i> Bgt.
Pl. 151, fig. 2, 3	<i>C. species</i> .
*Pl. 152, fig. 1, 2	<i>Asterocalamites radiatus</i> Bgt.
Pl. 152, fig. 3	<i>Asterocalamites radiatus</i> Bgt.
*Pl. 152, fig. 4, 5	<i>Asterocalamites radiatus</i> Bgt.
Pl. 153, fig. 1, 2, 3	<i>Asterocalamites radiatus</i> Bgt.
*Pl. 153, fig. 4, 5	<i>Asterocalamites radiatus</i> Bgt.
Pl. 153, fig. 6	„ <i>Anarthrocanna</i> ” Goeppert.
*Pl. 154, fig. 1, 2, 3	„ <i>Stigmatocanna volkmanniana</i> ” Goeppert.
Pl. 154, fig. 4	<i>Asterocalamites radiatus</i> Bgt.
Pl. 155, fig. 1	<i>C. carinatus</i> Sternb. var. <i>rugosus</i> Kidston et Jongmans.
Pl. 155, fig. 2, 3	<i>C. paleaceus</i> Stur.
Pl. 156, fig. 1, 2	<i>C. jubatus</i> L. et H.
*Pl. 156, fig. 3; Pl. 157, fig. 1, 2	<i>C. jubatus</i> L. et H.
*Pl. 156, fig. 4, 5	<i>C. roemeri</i> Goeppert.
Pl. 156, fig. 6	<i>C. carinatus</i> Sternb.
Pl. 156, fig. 7	<i>C. verticillatus</i> L. et H.
Pl. 156, fig. 8	<i>C. cruciatus</i> Sternb.
*Pl. 157, fig. 1, 2; Pl. 156, fig. 3	<i>C. jubatus</i> L. et H.
Pl. 157, fig. 3	<i>C. jubatus</i> L. et H.
Pl. 157, fig. 4	<i>C. schützei</i> Stur.
Pl. 157, fig. 5	<i>C. undulatus</i> Sternb.
Pl. 158, fig. 1	<i>C. cisti</i> Bgt.
*Pl. 158, fig. 2, 3	<i>Asterophyllites equisetiformis</i> Schl.
Pl. 158, fig. 4	<i>Annularia stellata</i> Schl.
Pl. 158, fig. 5	<i>Palaeostachya gracillima</i> Weiss.

# LIST OF THE SPECIES OF CALAMITES INCLUDED IN THIS MEMOIR, WITH REFERENCES TO THE PLATES ON WHICH THEY ARE FIGURED.

<i>C. approximatifomis</i> Stur . . . . .	Pl. 141, fig. 1, 2, 3.
<i>C. arborescens</i> Sternb. . . . .	Pl. 104, fig. 2, 3.
<i>C. artisi</i> Renault . . . . .	Pl. 129, fig. 2, 3.
<i>C. bohemicus</i> K. et J. . . . .	Pl. 59, fig. 3.
<i>C. britannicus</i> Weiss . . . . .	Pl. 119, fig. 1; Pl. 122, fig. 2.
<i>C. brittsii</i> White . . . . .	Pl. 62, fig. 4; Pl. 63, fig. 1, 2, 3; ? Pl. 65, fig. 3, 4, 5.
<i>C. brongniarti</i> Sternb. . . . .	Pl. 128, fig. 2; Pl. 129, fig. 1.
<i>C. carinatus</i> Sternb. . . . .	Pl. 66, fig. 5; Pl. 104, fig. 5; Pl. 105; Pl. 106, fig. 1, 2, 3, 4; Pl. 107, fig. 1; Pl. 108, fig. 1, 2; Pl. 156, fig. 6.
<i>C. carinatus</i> Sternb. var. <i>rugosus</i> K. et J. . . . .	Pl. 41, fig. 1, 2, 3; Pl. 155, fig. 1.
<i>C. carinatus</i> Sternb. var. <i>A.</i> . . . . .	Pl. 118, fig. 1.
<i>C. carinatus</i> Sternb. var. <i>B.</i> . . . . .	Pl. 116, fig. 3.
<i>C. cisti</i> Bgt. . . . .	Pl. 94, fig. 1, 2; Pl. 95, fig. 2, 3, 4, 5; Pl. 96, fig. 1, 2; ? Pl. 106, fig. 5; Pl. 158, fig. 1.
<i>C. cistiiformis</i> Stur . . . . .	Pl. 141, fig. 6; Pl. 142, fig. 2, ? fig. 3; Pl. 143, fig. 7; Pl. 144, fig. 4; Pl. 145, fig. 1, 6; Pl. 147, fig. 1, 2, 3, 4.
<i>C. cruciatus</i> Sternb. . . . .	Pl. 113, fig. 3, 4; Pl. 114, fig. 3; Pl. 121, fig. 1; Pl. 130, fig. 1, 2; Pl. 131, fig. 1; Pl. 156, fig. 8.
<i>C. cucullatus</i> Weiss . . . . .	Pl. 121, fig. 2; Pl. 122, fig. 1.
<i>C. deltenrei</i> K. et J. . . . .	Pl. 69, fig. 1.
<i>C. dictyoderma</i> K. et J. . . . .	Pl. 50, fig. 1, 2.
<i>C. discifer</i> Weiss . . . . .	Pl. 58, fig. 4; Pl. 61, fig. 4; Pl. 62, fig. 3; Pl. 65, fig. 2; Pl. 67, fig. 2, 3; Pl. 68, fig. 3; Pl. 78, fig. 2.
<i>C. distachyus</i> Sternb. . . . .	Pl. 101, 102.
<i>C. elongatus</i> Renault . . . . .	Pl. 132, fig. 3, 4.
<i>C. germanianus</i> Goeppert . . . . .	Pl. 58, fig. 2; Pl. 69, fig. 2; Pl. 138, fig. 2; ? Pl. 71, fig. 1, 2.
<i>C. gigas</i> Bgt. . . . .	Pl. 90, fig. 3, 4, 5; Pl. 91; Pl. 92, fig. 1, 2, 3; Pl. 93, fig. 1, 2; Pl. 96, fig. 3.
<i>C. goepperti</i> Ett. . . . .	Pl. 51, fig. 3, 4; Pl. 53, 54; Pl. 55, fig. 1-4; Pl. 56, fig. 1-4; Pl. 61, fig. 3; Pl. 65, fig. 1; Pl. 66, fig. 1, 2, 3; Pl. 81, fig. 4; Pl. 135, fig. 1, 2; Pl. 136, fig. 1.
<i>C. haueri</i> Stur . . . . .	Pl. 142, fig. 5, 6; Pl. 143, fig. 3, 4; Pl. 144, fig. 2, 3; Pl. 145, fig. 2, 3, 4, 7; Pl. 146, fig. 1, 2.
<i>C. infractus</i> Gutbier. . . . .	? Pl. 39, fig. 4; Pl. 131, fig. 2, 3; Pl. 132, fig. 1, ? 2; ? Pl. 133, fig. 1.
<i>C. jubatus</i> L. et H. . . . .	Pl. 97; Pl. 98; Pl. 99, fig. 1; Pl. 100, fig. 1, 2; Pl. 156, fig. 1, 2, 3; Pl. 157, fig. 1, 2, 3.
<i>C. multiramis</i> Weiss. . . . .	Pl. 114, fig. 1, 2; Pl. 115, fig. 2; Pl. 116, fig. 1; Pl. 117, fig. 1; Pl. 118, fig. 2; Pl. 119, fig. 2; Pl. 120, fig. 1, 2; Pl. 122, fig. 3, 4; Pl. 123, fig. 1-5; Pl. 124, fig. 2, 3; Pl. 125, fig. 1, 2; Pl. 126, fig. 1, 2; Pl. 127; Pl. 128, fig. 1.

<i>C. multiramis</i> Weiss var. <i>elongatus</i> Gutbier . . .	Pl. 124, fig. 1; Pl. 130, fig. 3; Pl. 133, fig. 2, 3.
<i>C. ohlsbachensis</i> Sterzel . . . . .	Pl. 48, fig. 4; Pl. 49, fig. 2—7.
<i>C. paleaceus</i> Stur . . . . .	Pl. 66, fig. 6; Pl. 67, fig. 1; Pl. 81, fig. 1; Pl. 108, fig. 3, 4, 5; Pl. 109, 110, 111, 112; Pl. 113, fig. 1, 2; Pl. 114, fig. 4; Pl. 115, fig. 1; Pl. 116, fig. 2; Pl. 155, fig. 2, 3.
<i>C. cf. paleaceus</i> Stur . . . . .	Pl. 117, fig. 2.
<i>C. pseudogermanicus</i> K. et J. . . . .	Pl. 59, fig. 4; Pl. 64, fig. 1; Pl. 68, fig. 4, 5.
<i>C. ramifer</i> Stur . . . . .	Pl. 141, fig. 4, 5; Pl. 142, fig. 1, 4; Pl. 143, fig. 1, 2; Pl. 144, fig. 1.
<i>C. renaulti</i> K. et J. . . . .	Pl. 107, fig. 2, 3.
<i>C. roemeri</i> Goepfert . . . . .	Pl. 40, fig. 1, 2; Pl. 47, fig. 1; Pl. 138, fig. 4; Pl. 143, fig. 5, 6; Pl. 156, fig. 4, 5.
<i>C. sachsei</i> Stur . . . . .	Pl. 56, fig. 5, 6?; Pl. 57, fig. 1—3?, fig. 4—7; Pl. 58, fig. 1, 3; Pl. 59, fig. 1; Pl. 60, fig. 1, 2, 3; Pl. 61, fig. 1, 2; Pl. 62, fig. 1, 2; Pl. 63, fig. 4, 5, 6; Pl. 66, fig. 4; Pl. 95, fig. 1; Pl. 99, fig. 2.
<i>C. schulzi</i> Stur . . . . .	Pl. 103; Pl. 104, fig. 1.
<i>C. schützei</i> Stur . . . . .	Pl. 76, fig. 1, 2; Pl. 81, fig. 2, 3; Pl. 157, fig. 4.
<i>C. schützeiformis</i> K. et J. forma <i>typicus</i> K. et J. . . . .	Pl. 68, fig. 1; Pl. 71, fig. 3; Pl. 73, fig. 5; Pl. 74, fig. 1; Pl. 75, fig. 1, 2; Pl. 79, fig. 1, 2; Pl. 80, fig. 1, 2.
<i>C. schützeiformis</i> K. et J. forma <i>intermedius</i> K. et J. . . . .	Pl. 68, fig. 2; Pl. 73, fig. 1, 2; Pl. 76, fig. 3.
<i>C. schützeiformis</i> K. et J. forma <i>waldenburgensis</i> Kidston . . . . .	Pl. 71, fig. 4, 5; Pl. 72; Pl. 73, fig. 3, 4; Pl. 74, fig. 2, 3; Pl. 77, fig. 1, 2; Pl. 78, fig. 1, 3; Pl. 79, fig. 3, 4.
<i>C. semicircularis</i> Weiss . . . . .	Pl. 40, fig. 4; Pl. 42, fig. 1—5; Pl. 43, fig. 1, 4; Pl. 44, fig. 2, 3, 4; Pl. 45, fig. 1—3; Pl. 46, fig. 1—4; Pl. 47, fig. 2—6; Pl. 48, fig. 2; Pl. 49, fig. 1.
<i>C. steinhaueri</i> Bgt. . . . .	Pl. 88, fig. 1.
<i>C. suckowi</i> Bgt. . . . .	Pl. 39, fig. 2, 3; Pl. 82, 83, 84, 85, 86, 87; Pl. 88, fig. 2, 3; Pl. 89; Pl. 90, fig. 2; Pl. 136, fig. 2, 3; Pl. 137, fig. 1, 2; Pl. 138, fig. 1.
<i>C. taitianus</i> K. et J. . . . .	Pl. 147, fig. 5; Pl. 148, fig. 1; Pl. 149, fig. 1, 2, 3, 4, 5.
<i>C. transversalis</i> K. et J. . . . .	Pl. 59, fig. 2.
<i>C. undulatus</i> Sternb. . . . .	Pl. 1—23; Pl. 24, fig. 1, 2, 3; Pl. 25—28; Pl. 29, fig. 1, 2; Pl. 30; Pl. 31, fig. 1, 2, 3, (4), 5; Pl. 32—37; Pl. 38, fig. 1; Pl. 39, fig. 1; Pl. 44, fig. 1; Pl. 47, fig. 7; Pl. 48, fig. 1; Pl. 50, fig. 5; Pl. 51, fig. 1; Pl. 137, fig. 3; Pl. 157, fig. 5.
<i>C. vaginatus</i> Zeiller . . . . .	Pl. 48, fig. 3; Pl. 52, fig. 8.
<i>C. vandergrachtii</i> K. et J. . . . .	Pl. 69, fig. 3, 4; Pl. 70.
<i>C. verticillatus</i> L. et H. . . . .	Pl. 51, fig. 2; Pl. 52, fig. 3—7; Pl. 156, fig. 7.
<i>C. wedekindi</i> Weiss . . . . .	Pl. 40, fig. 3; Pl. 41, fig. 4; Pl. 43, fig. 2, 3, 5.

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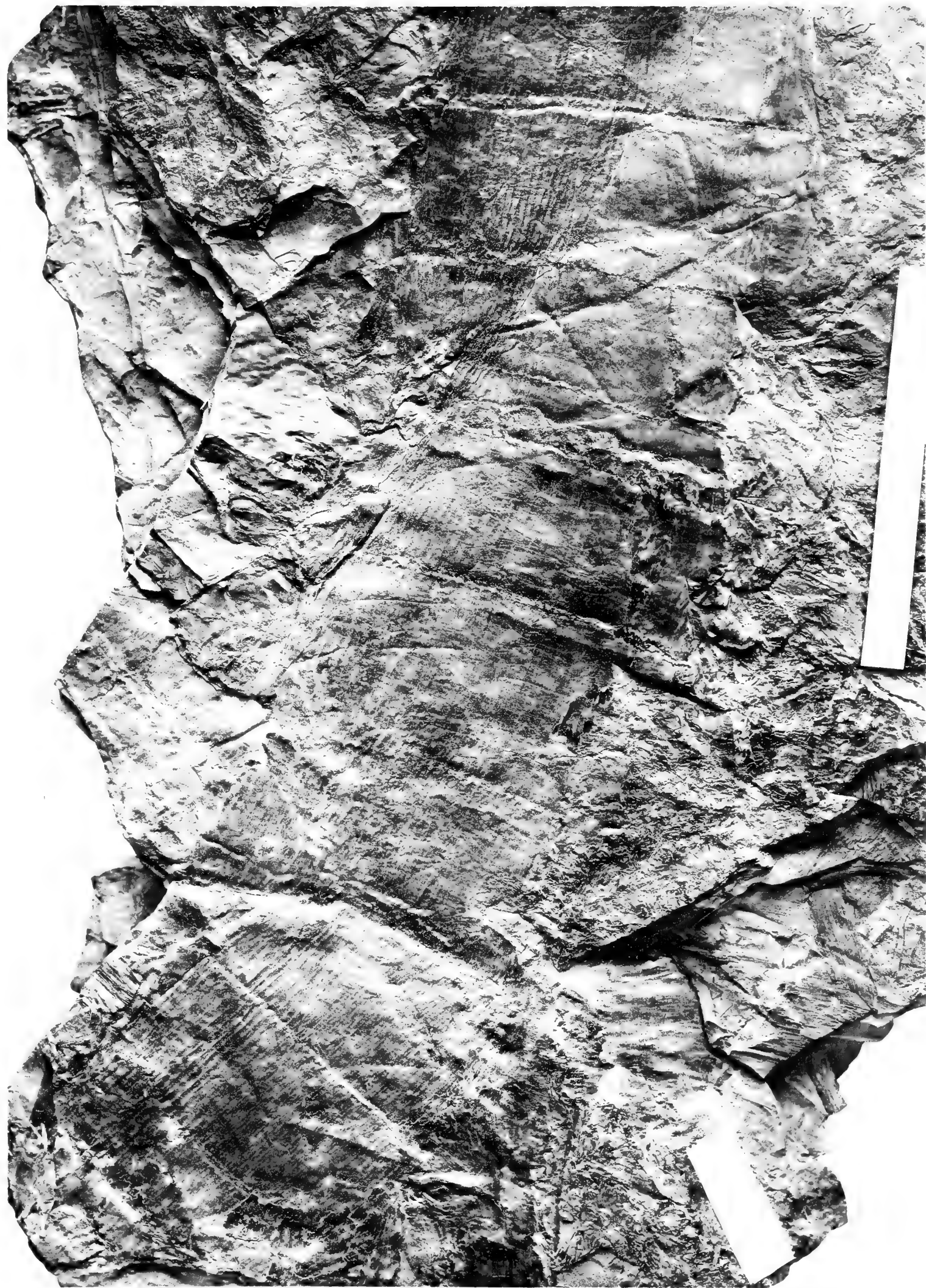
<i>Asterocalamites radiatus</i> Bgt. . . . .	Pl. 149, fig. 6; Pl. 150, fig. 1, 2, 3; Pl. 151, fig. 1; Pl. 152, fig. 1, 2, 3, 4, 5; Pl. 153, fig. 1, 2, 3, 4, 5; Pl. 154, fig. 4.
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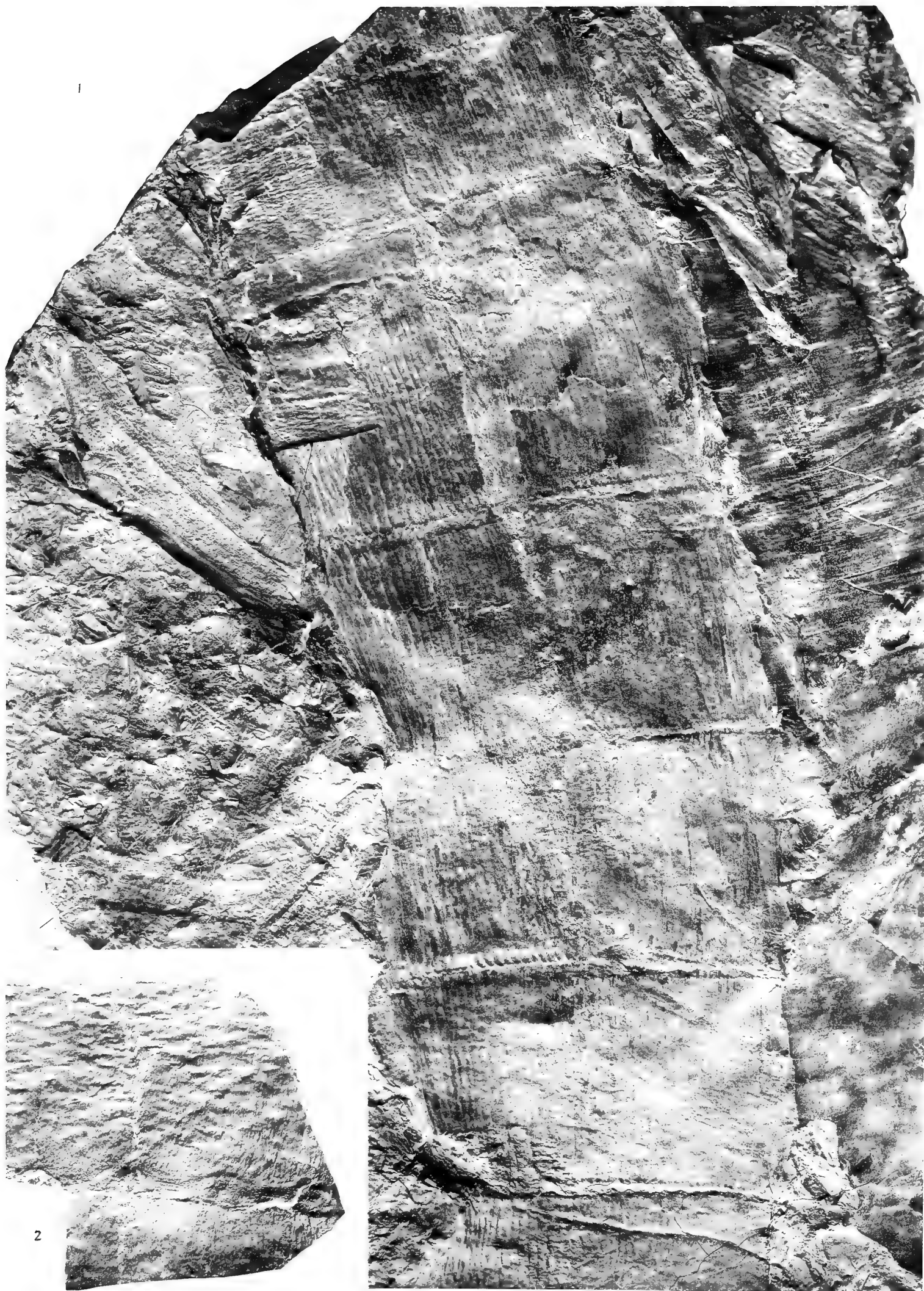






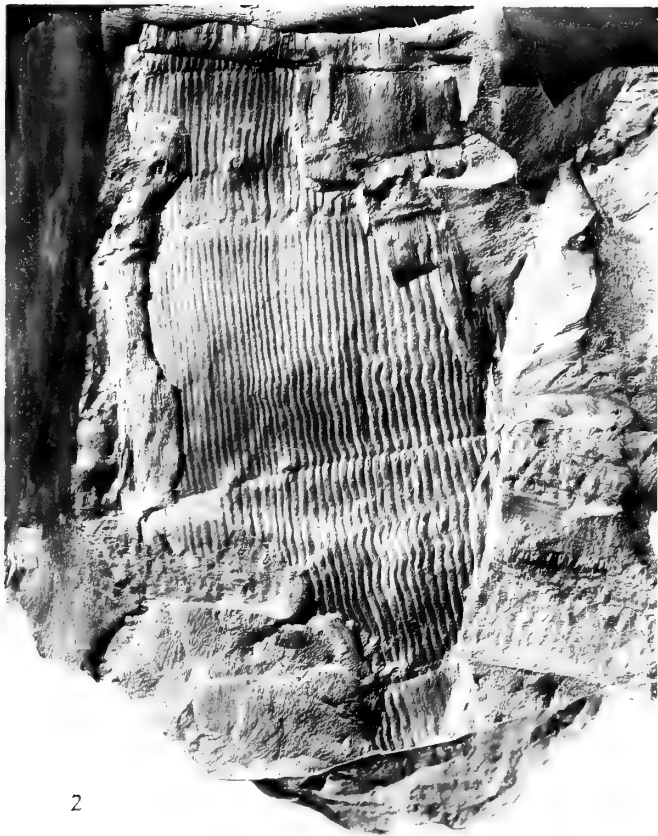




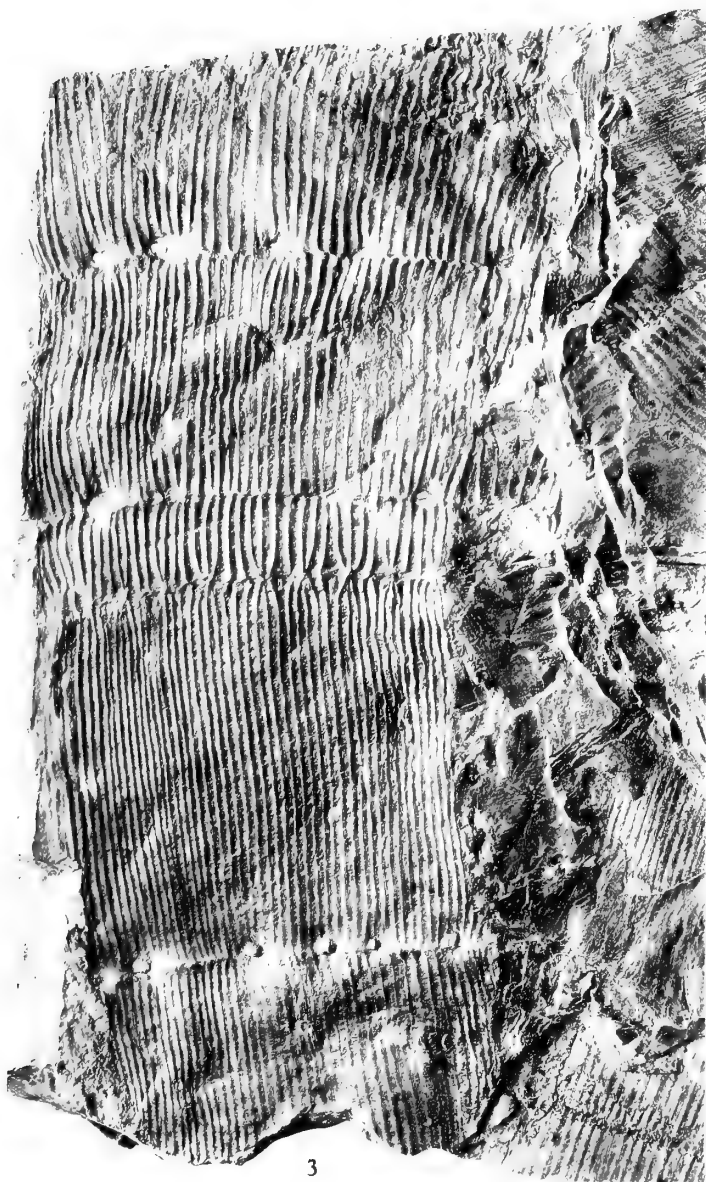








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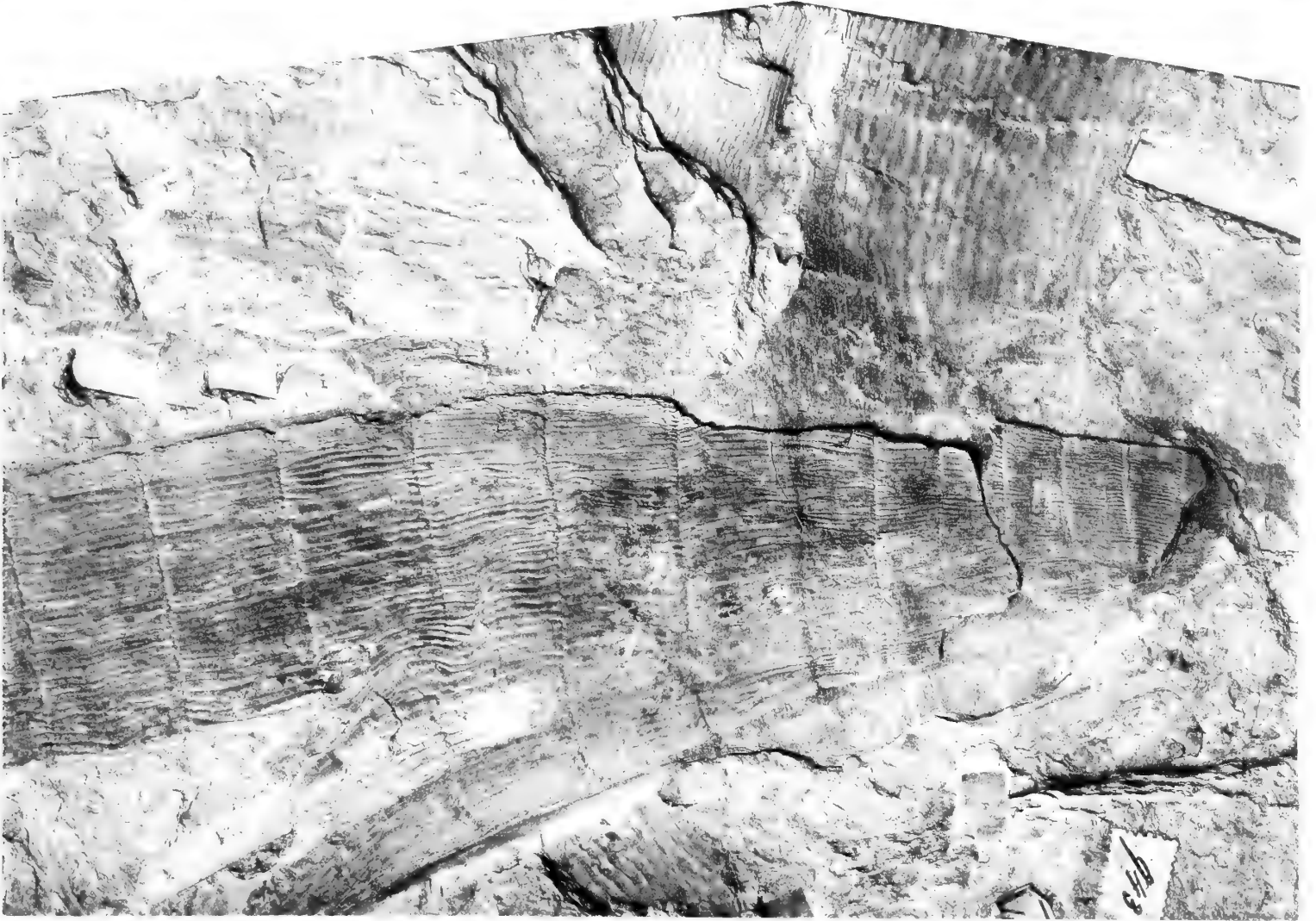


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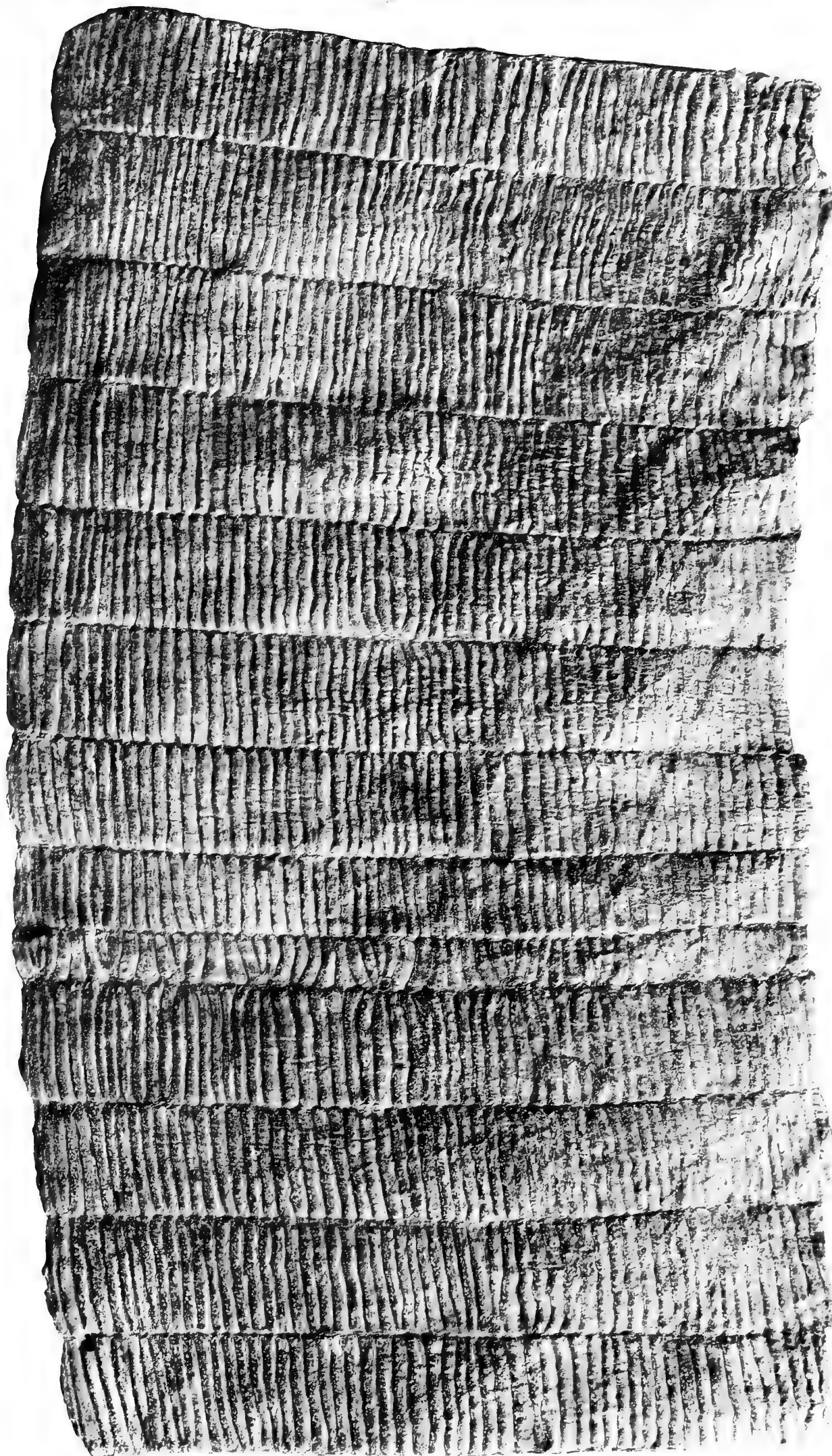




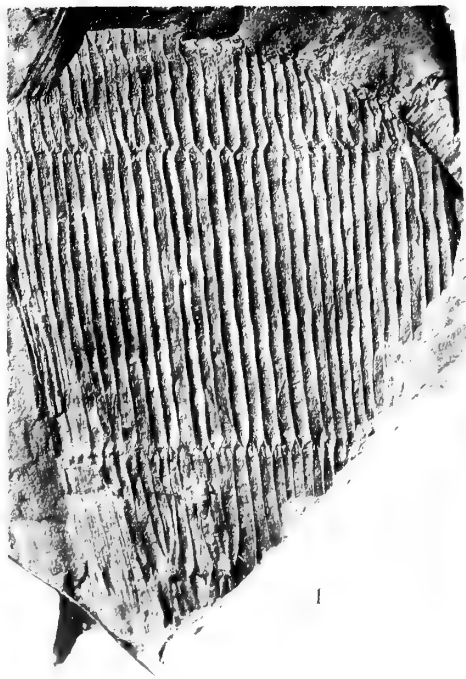




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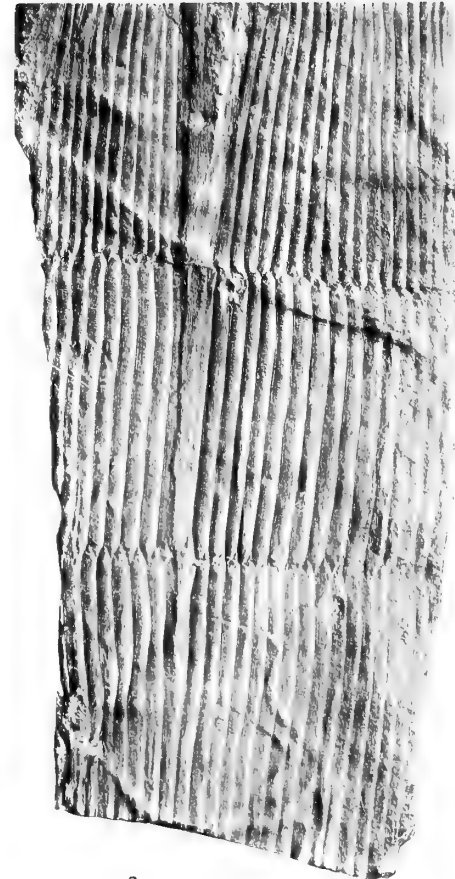




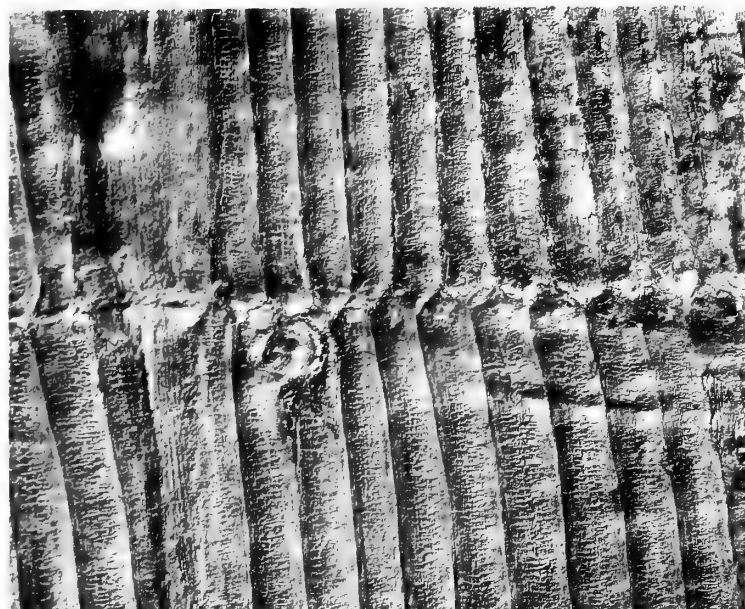
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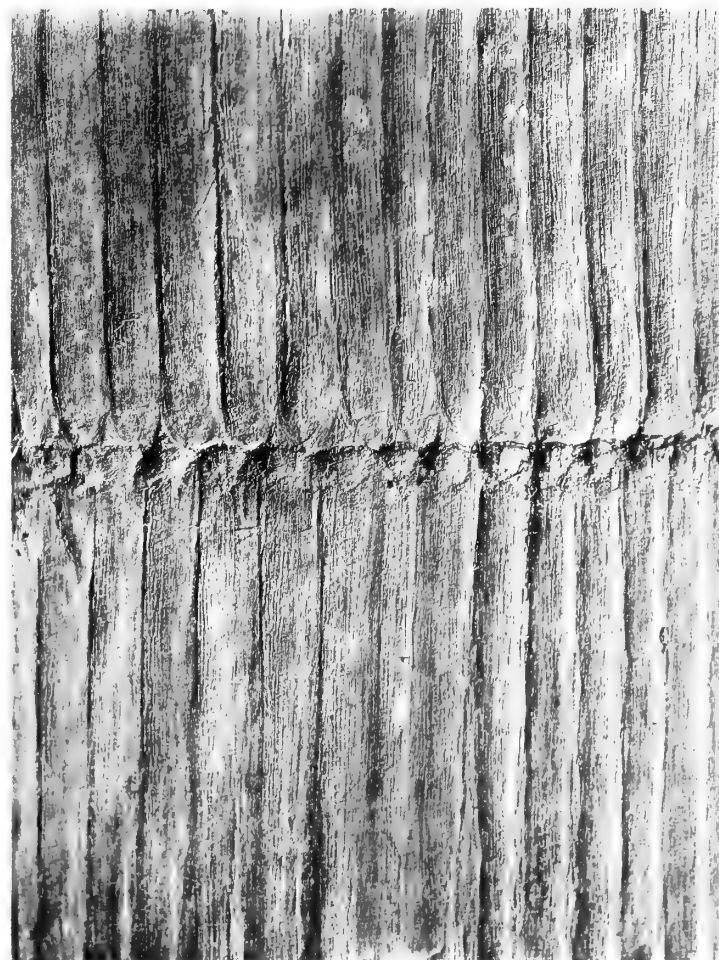
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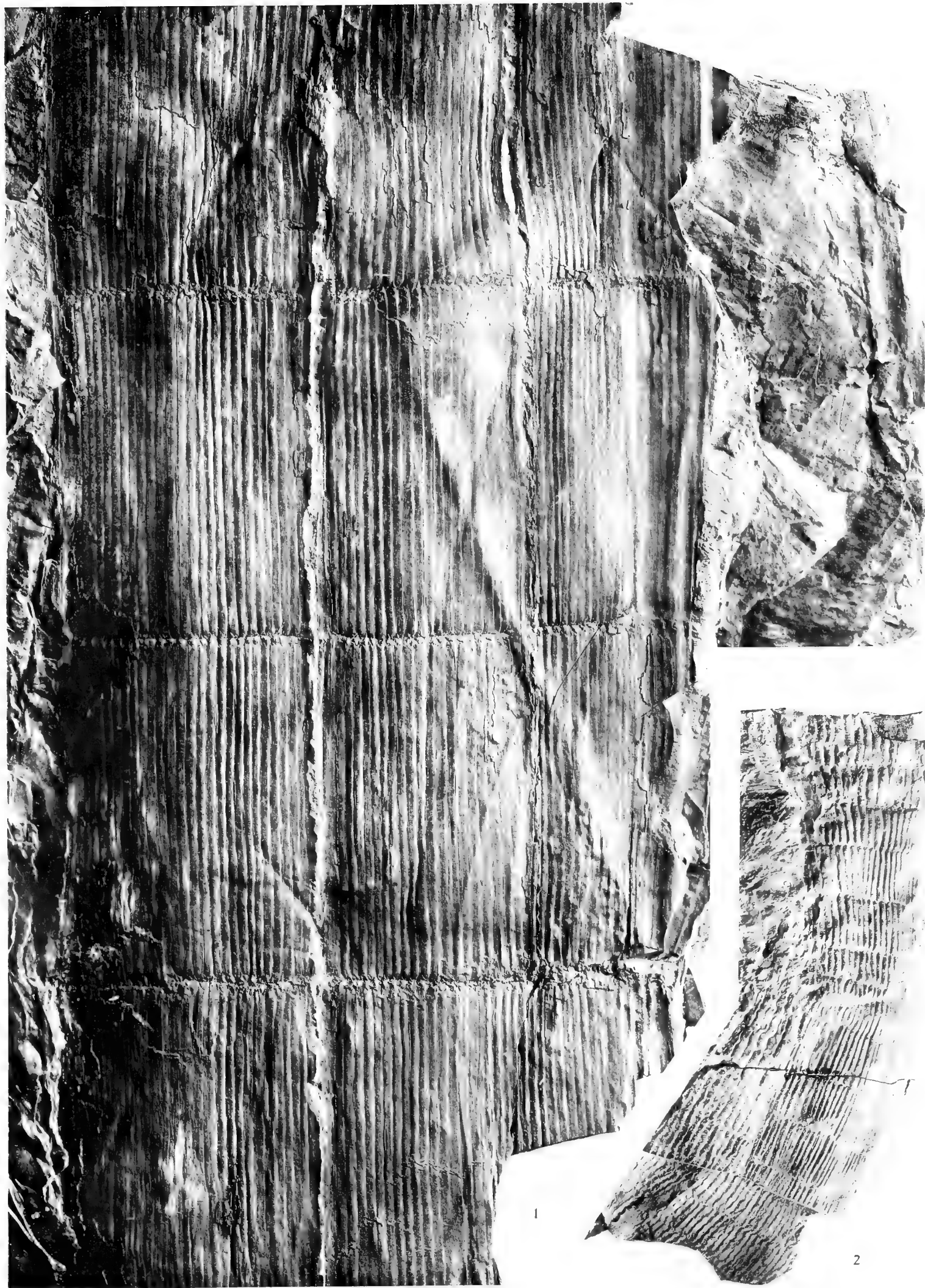
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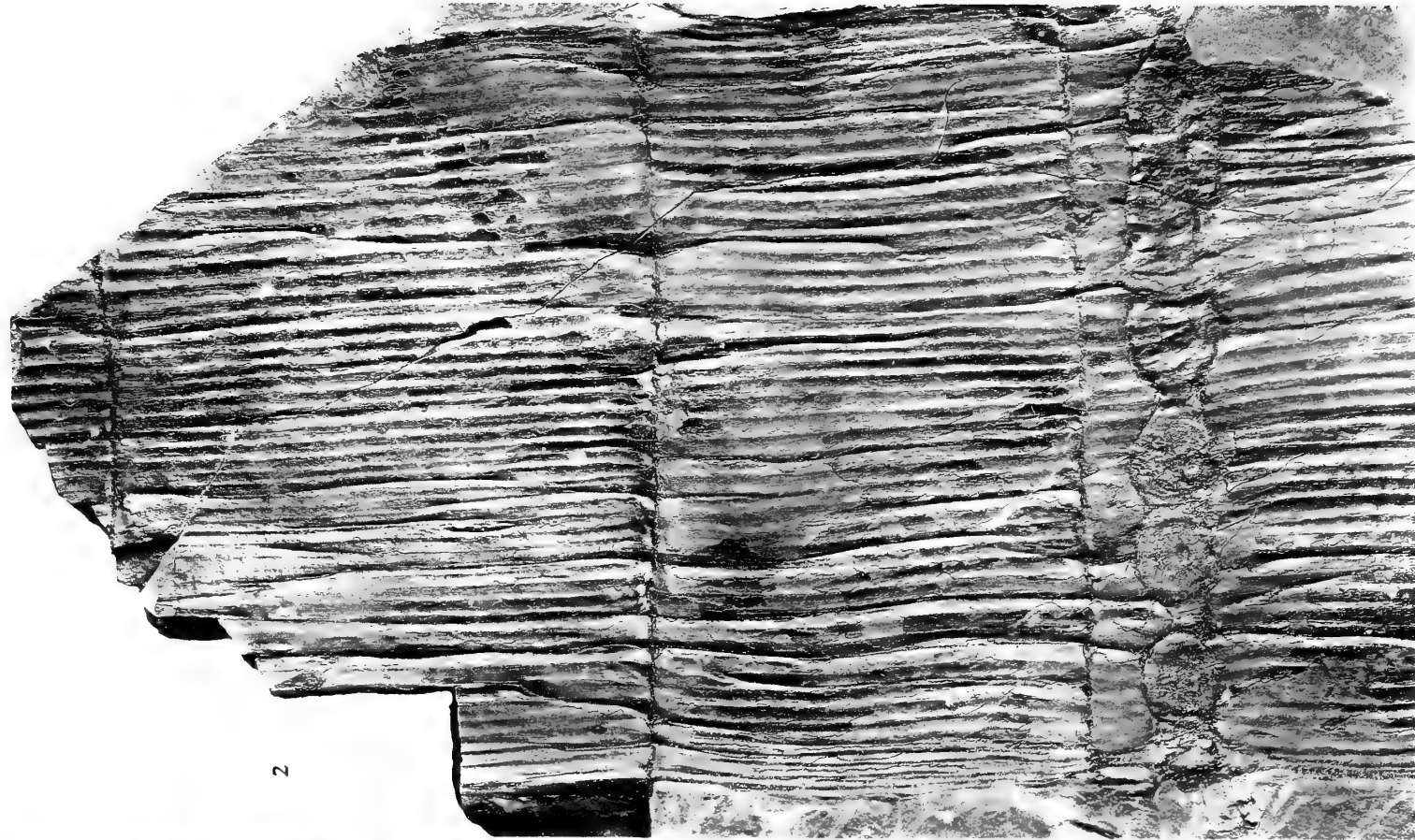
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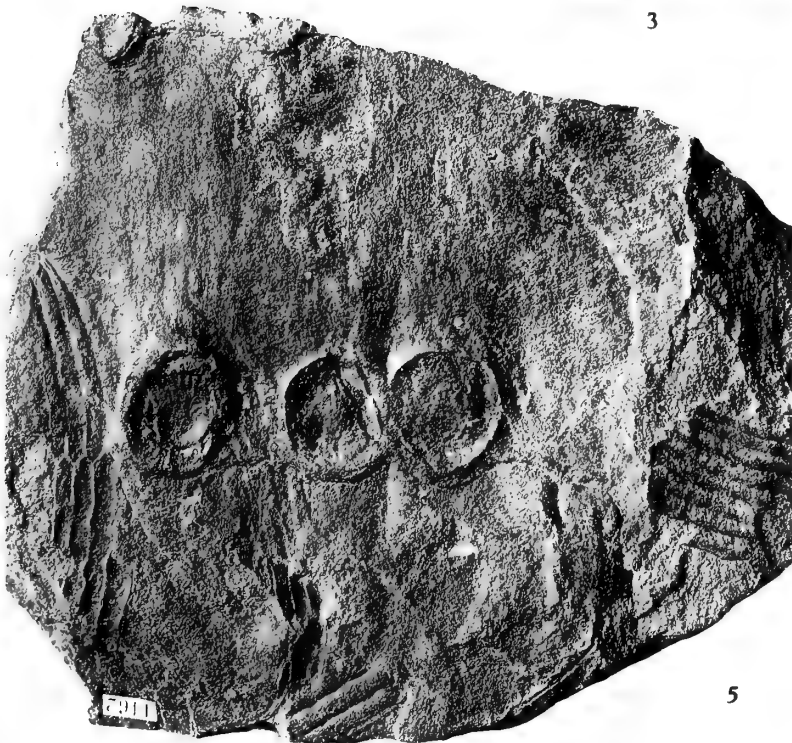
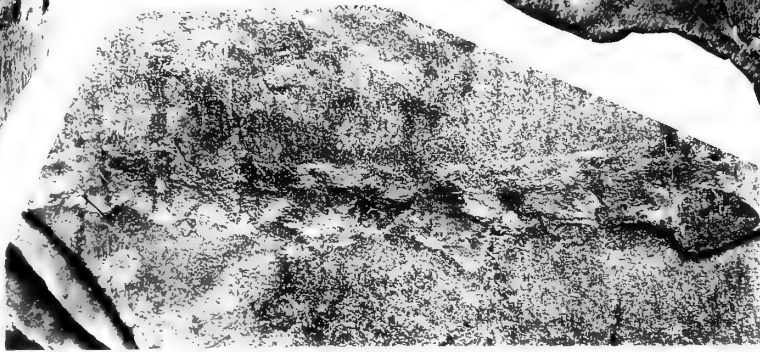
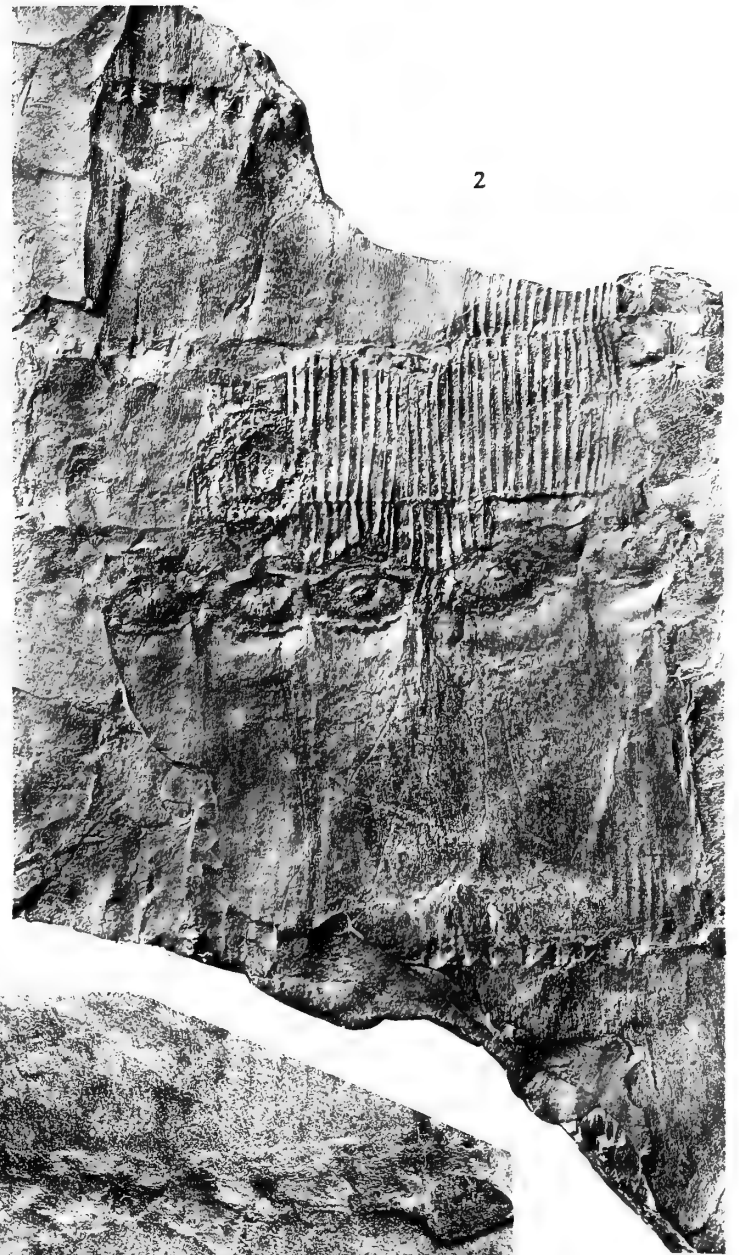
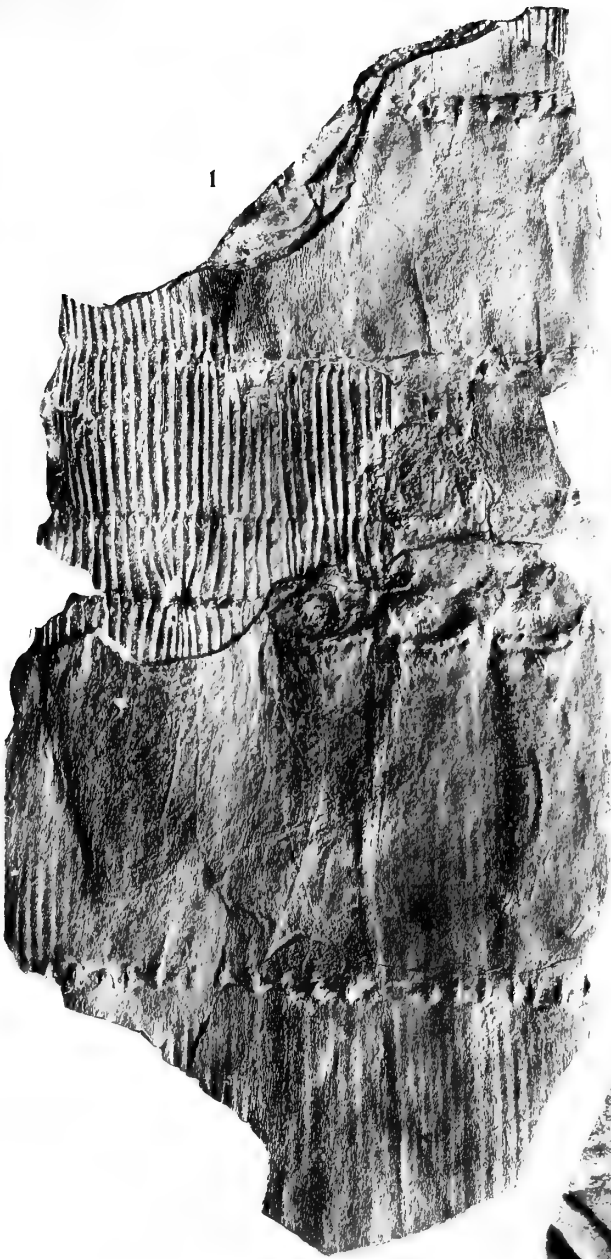




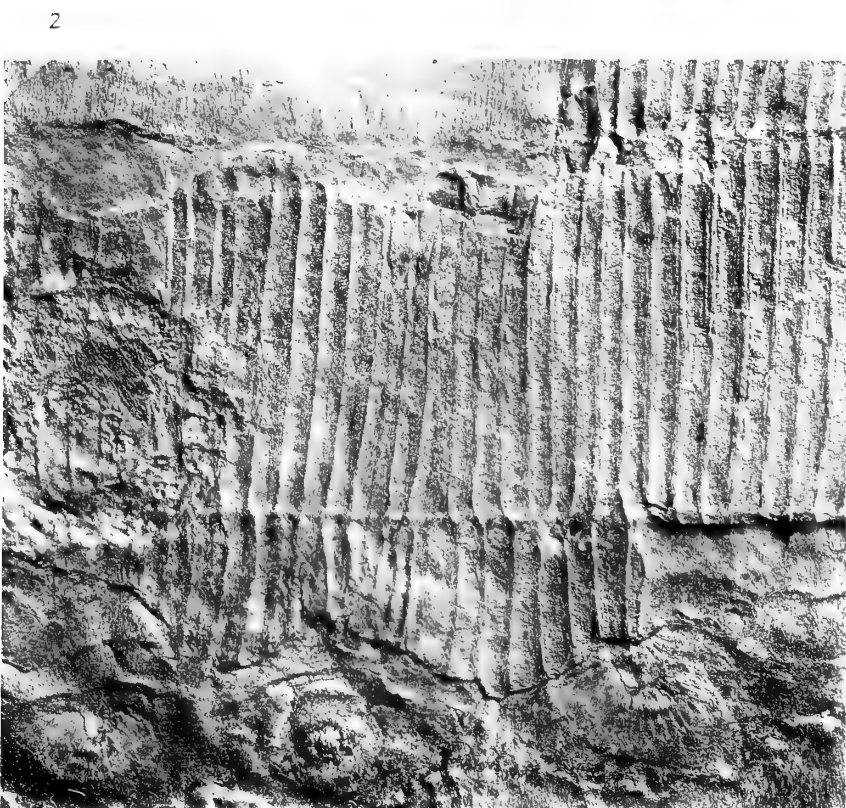
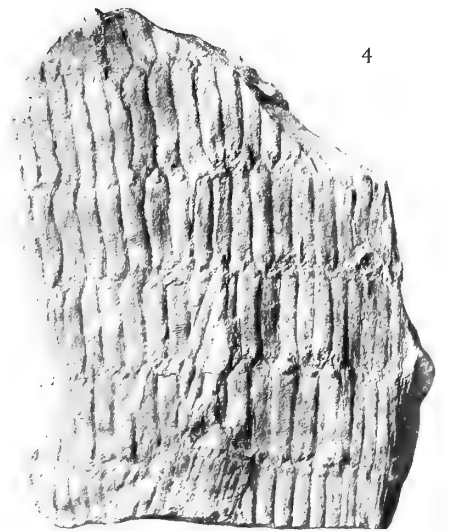






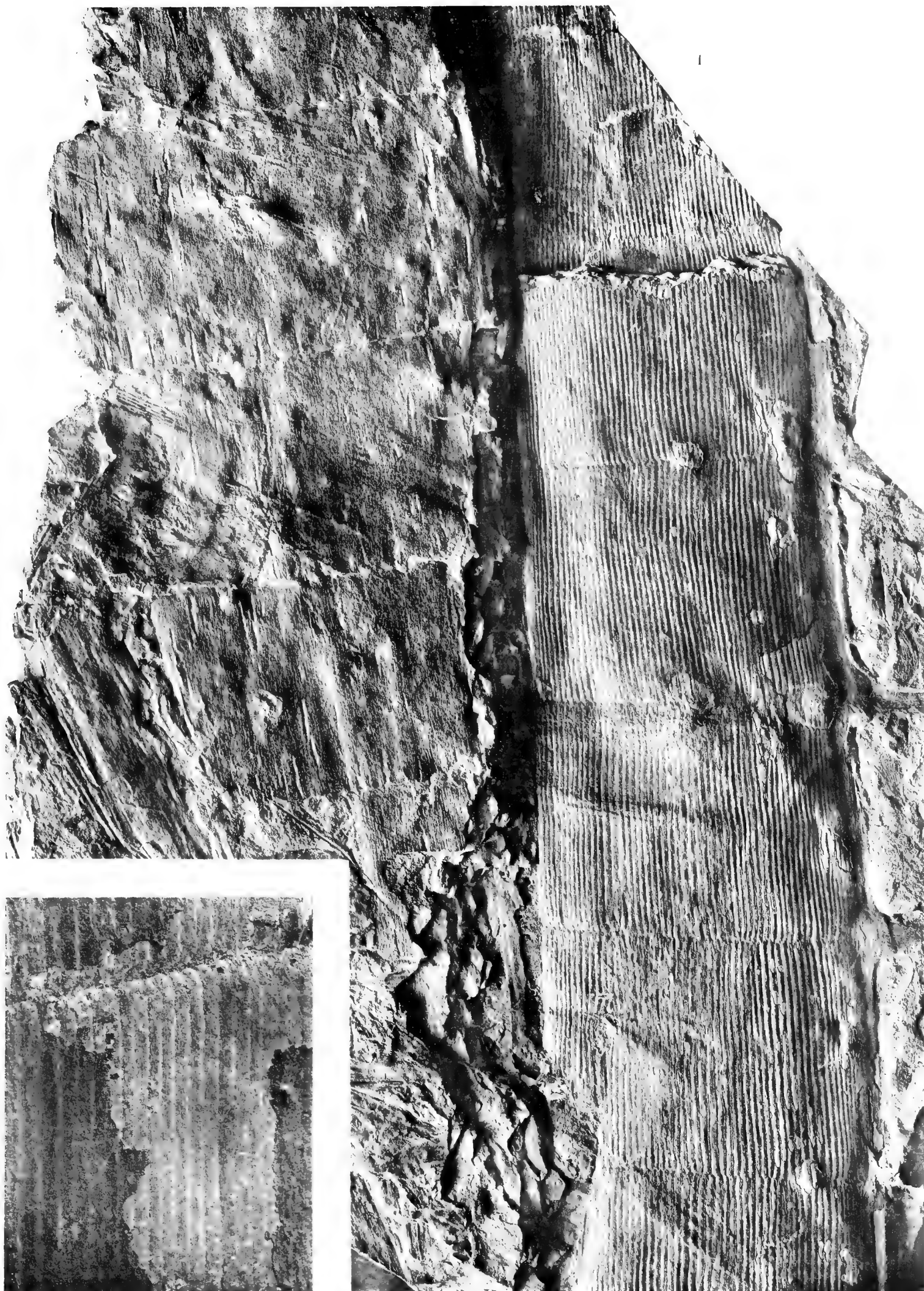








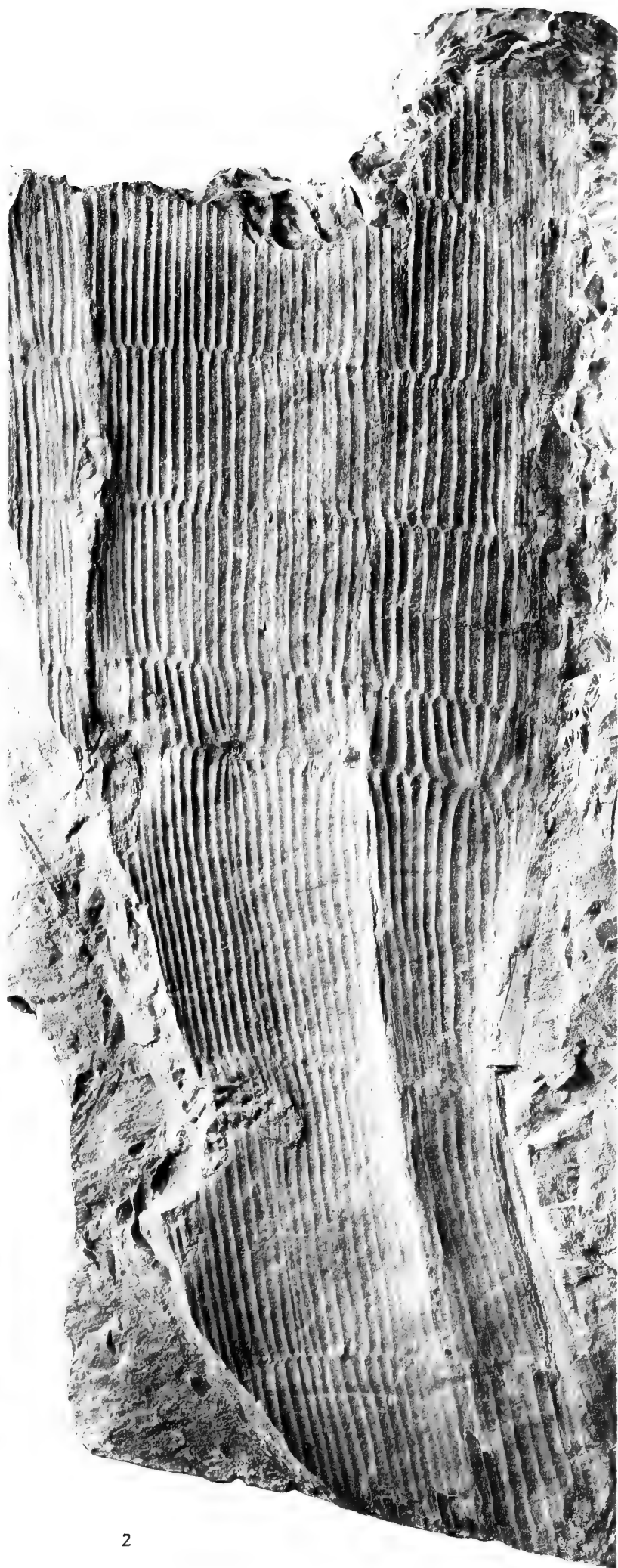




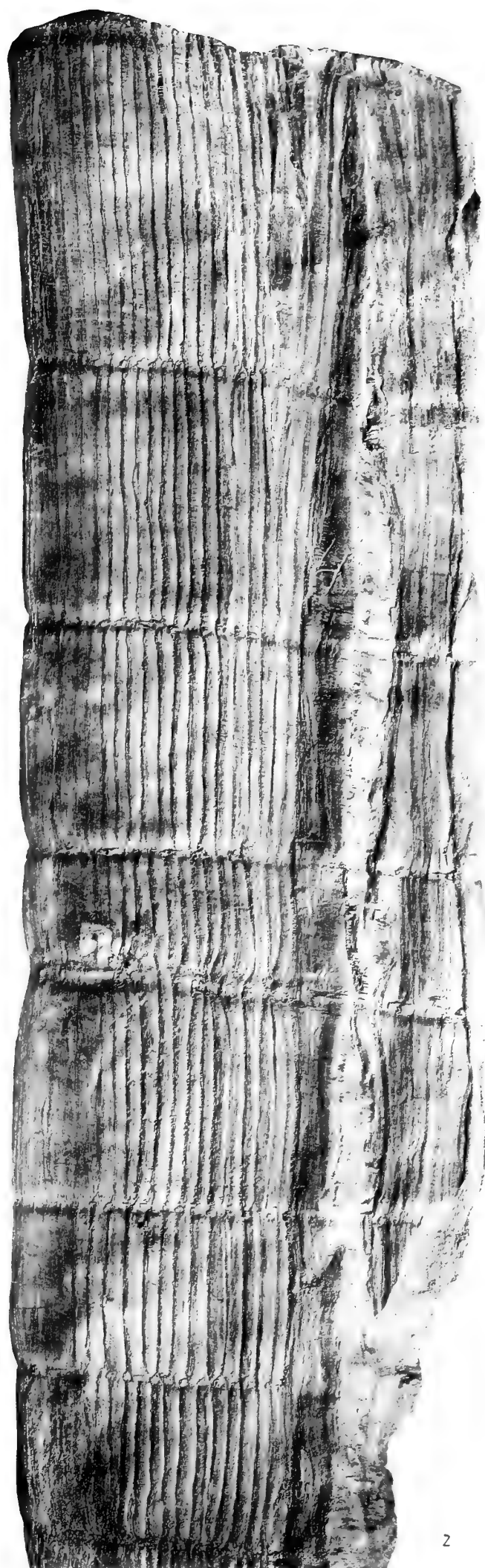
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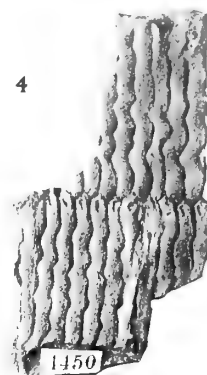
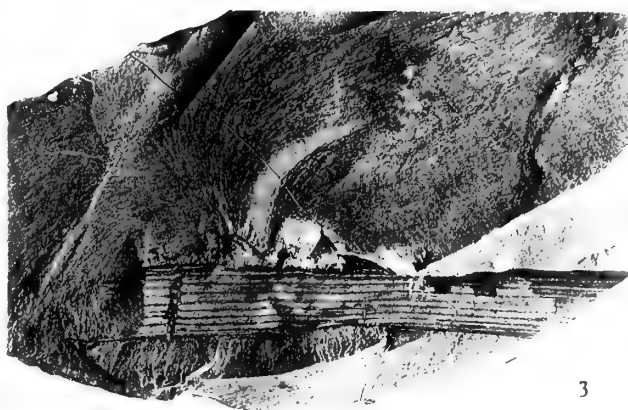
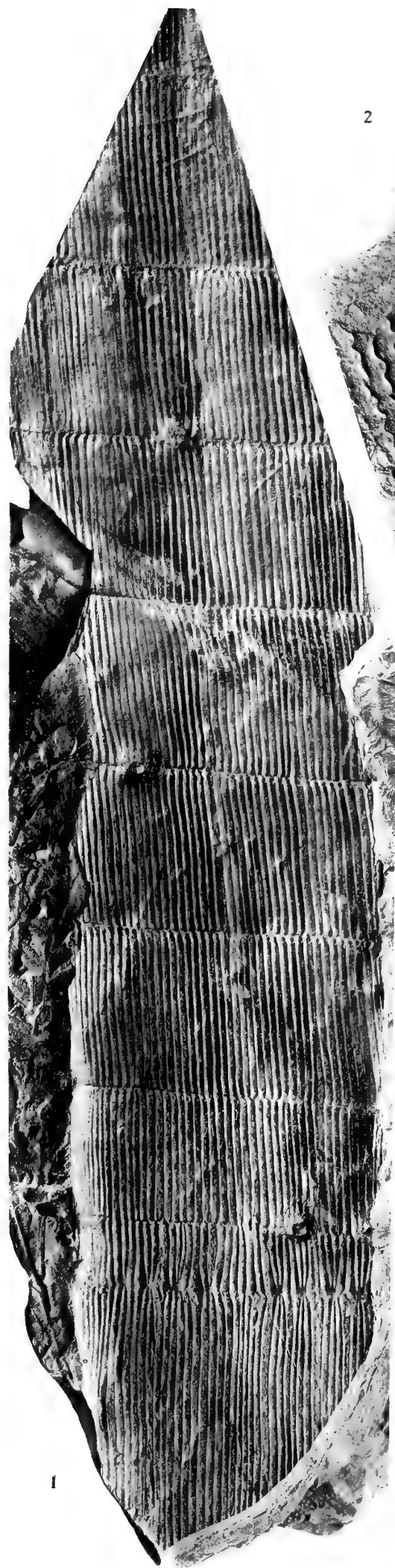






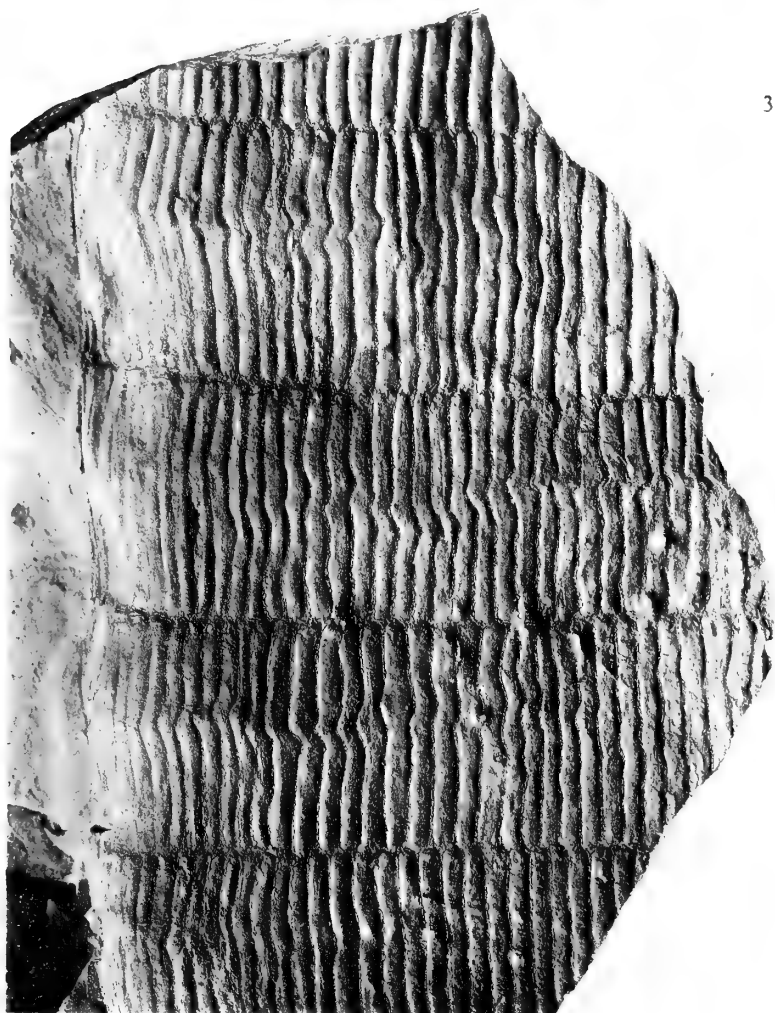




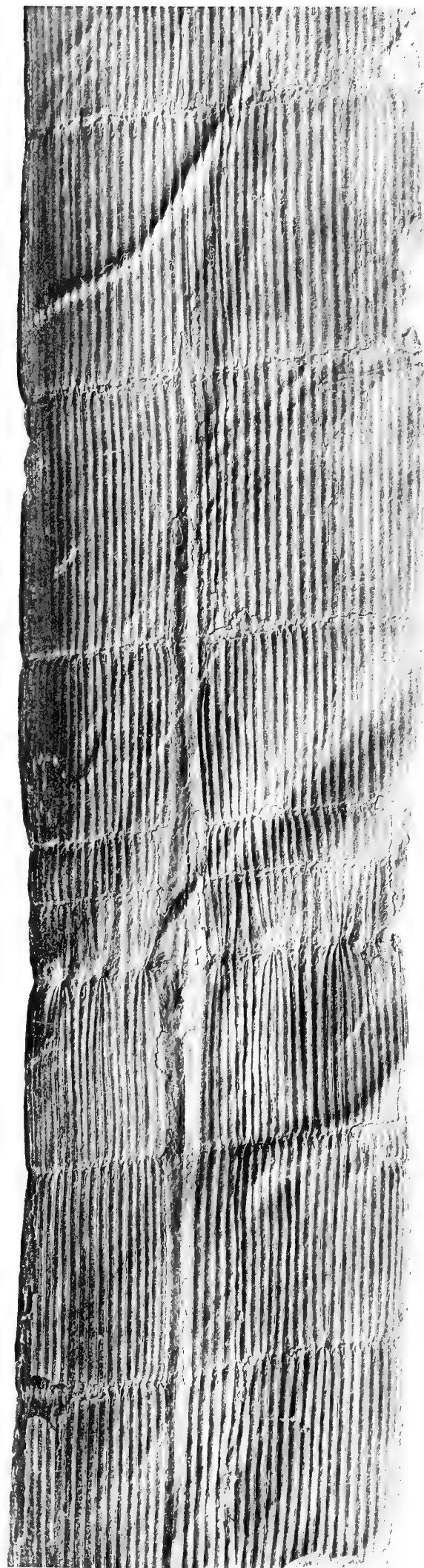
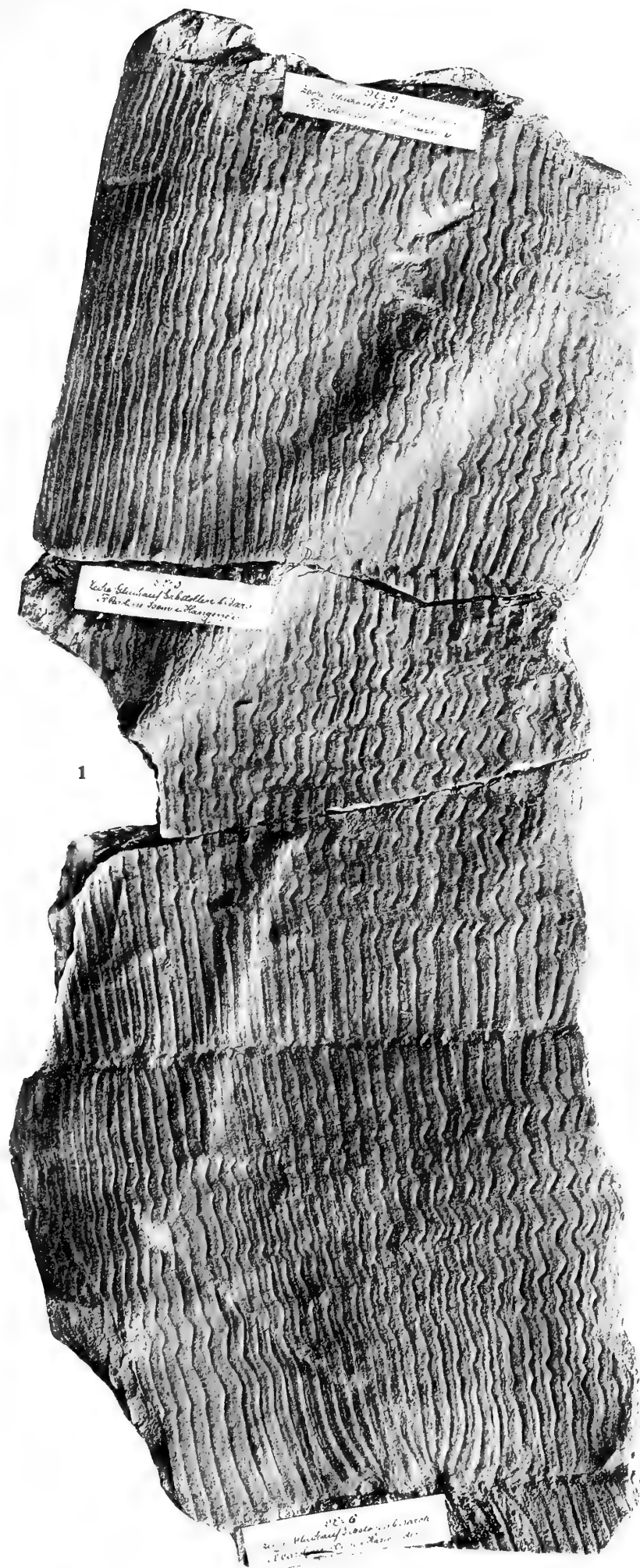






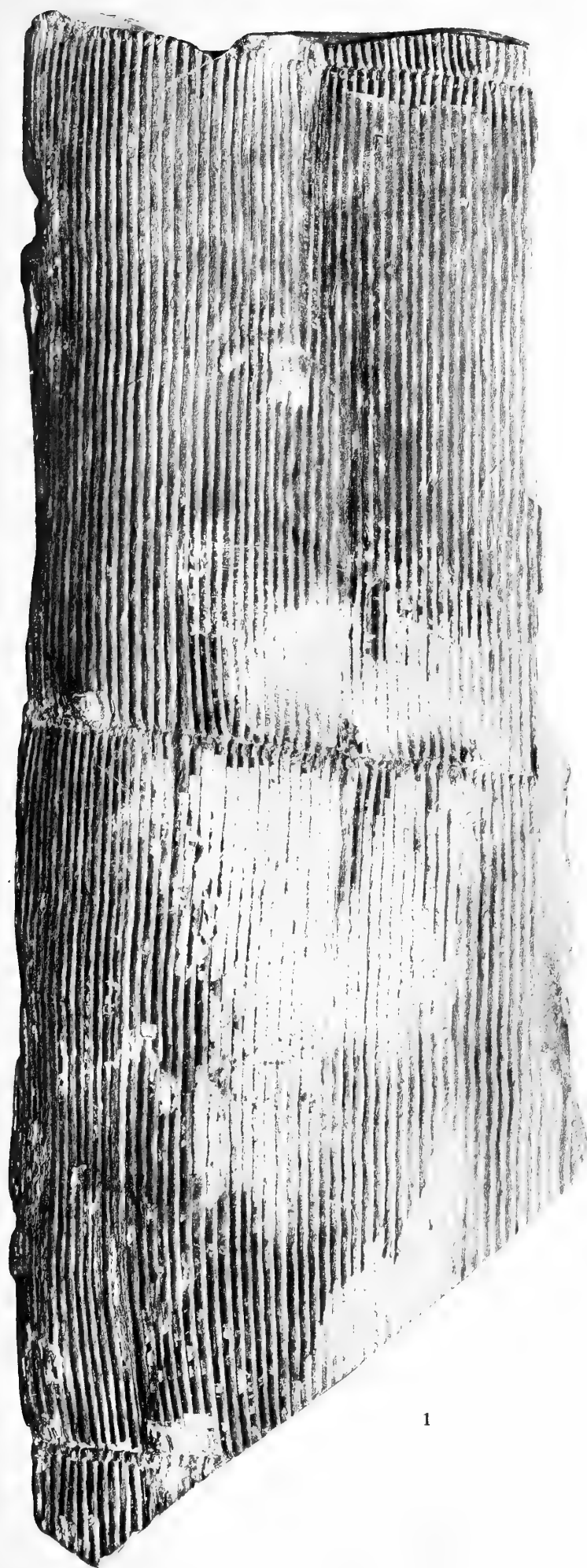




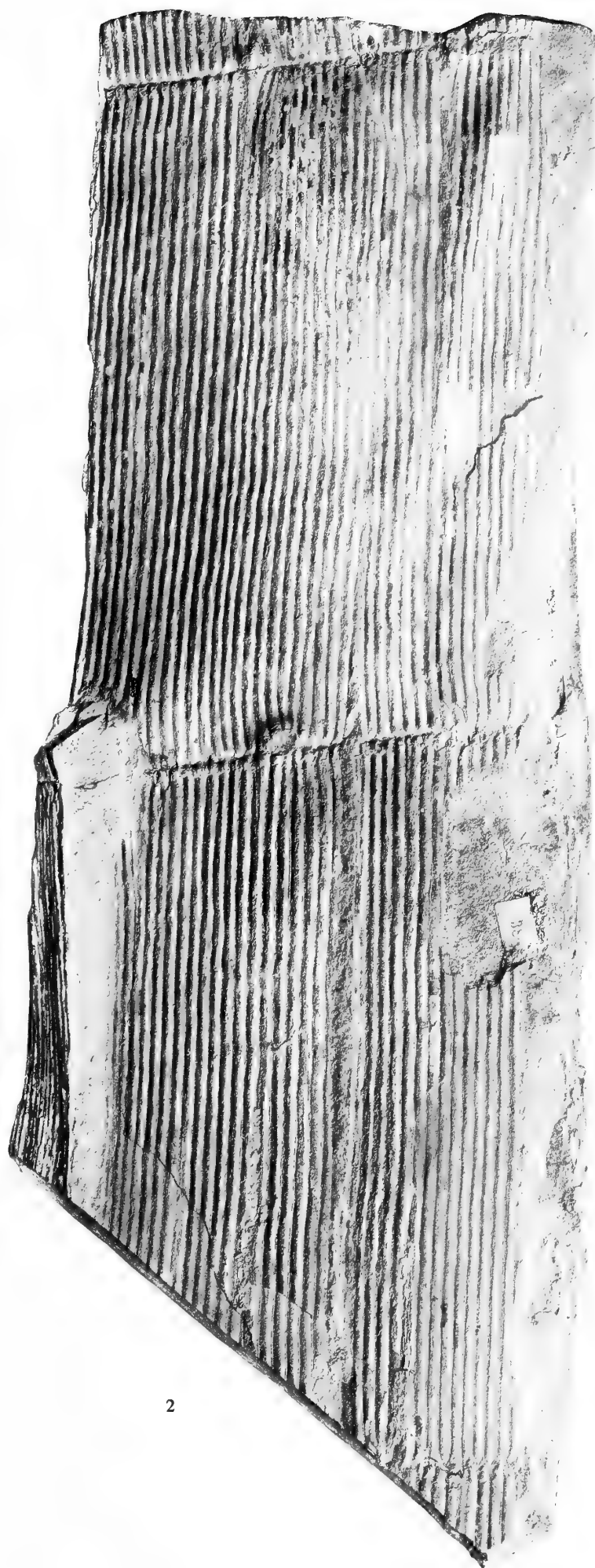








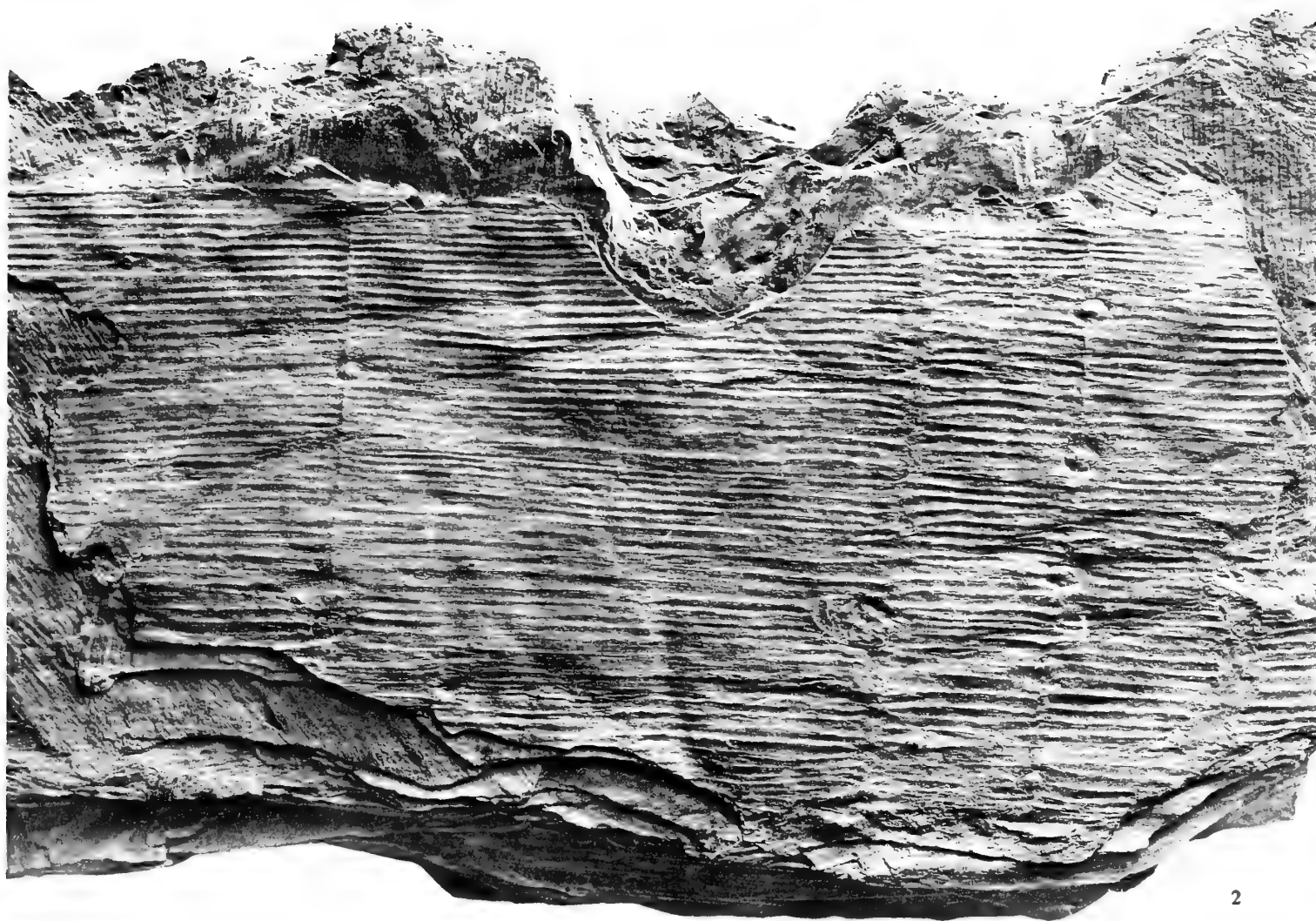
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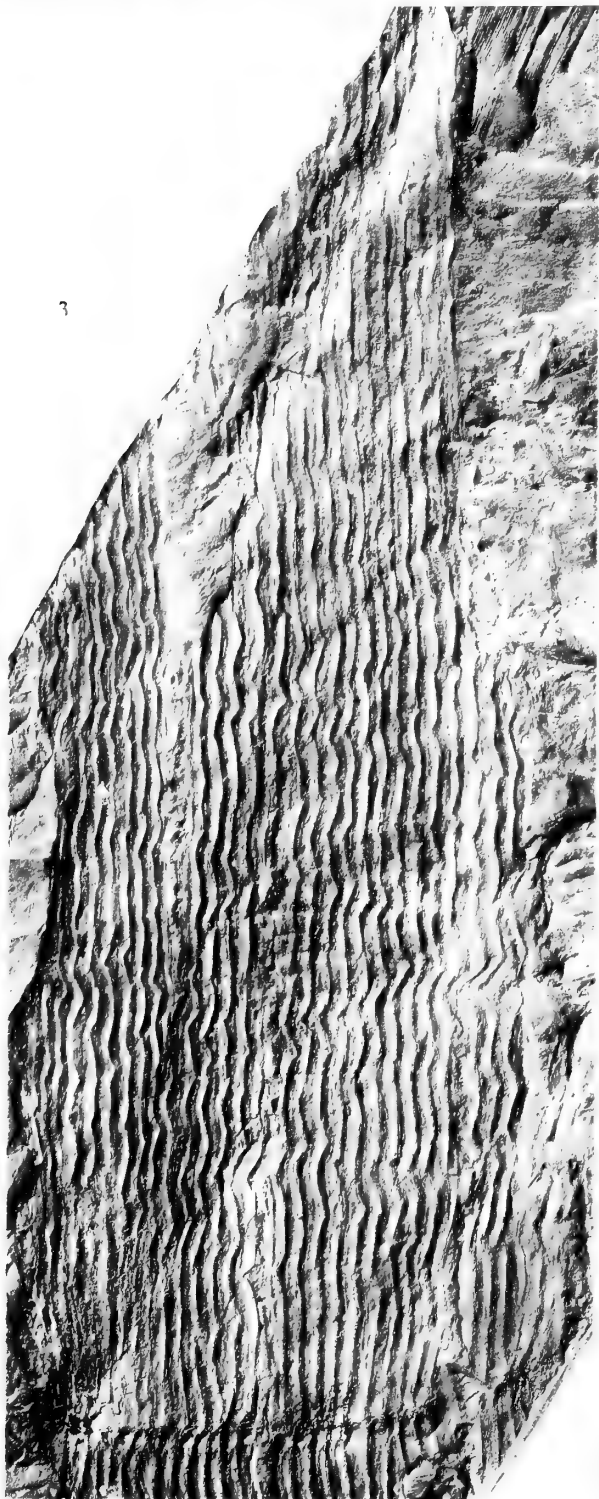






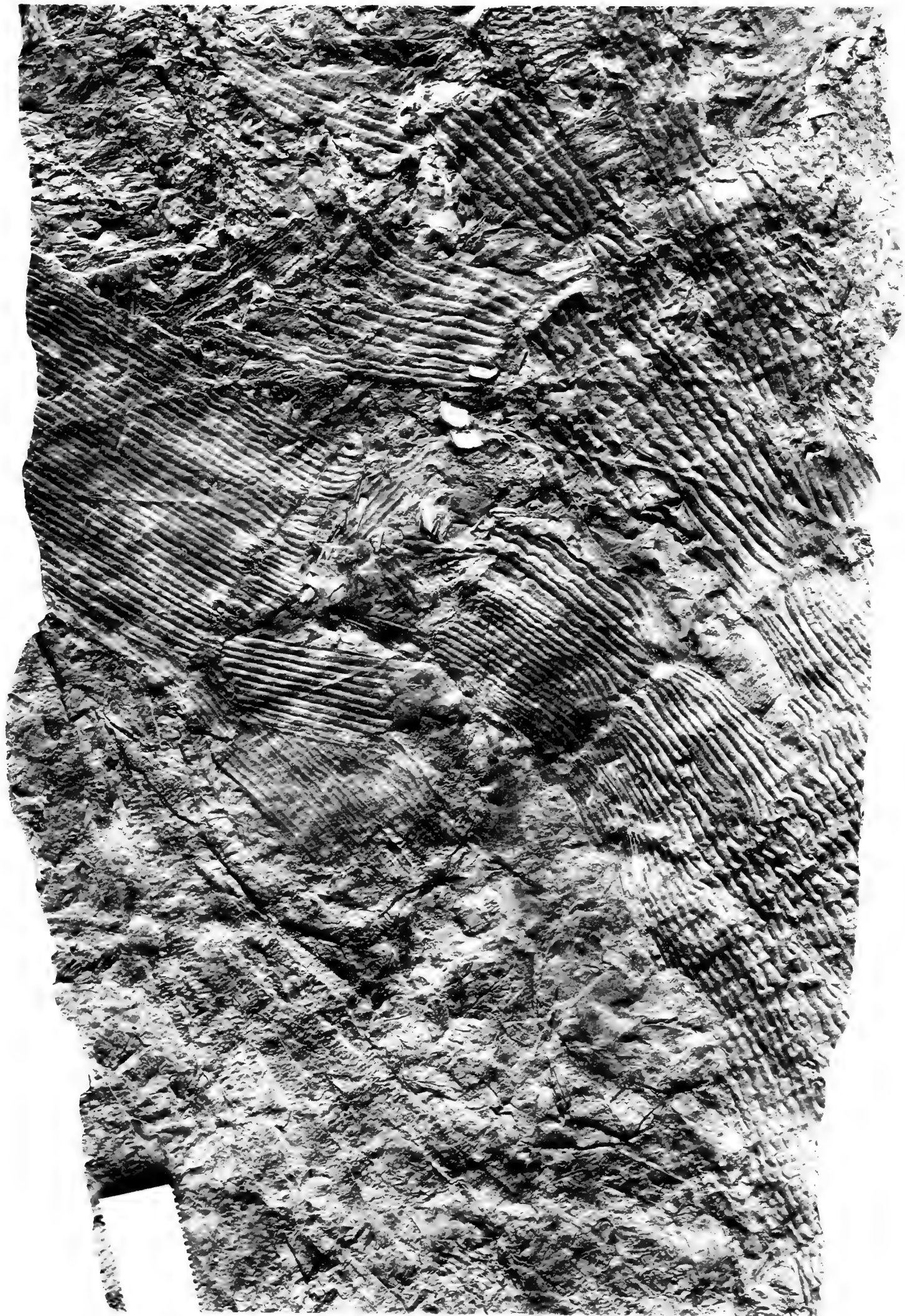


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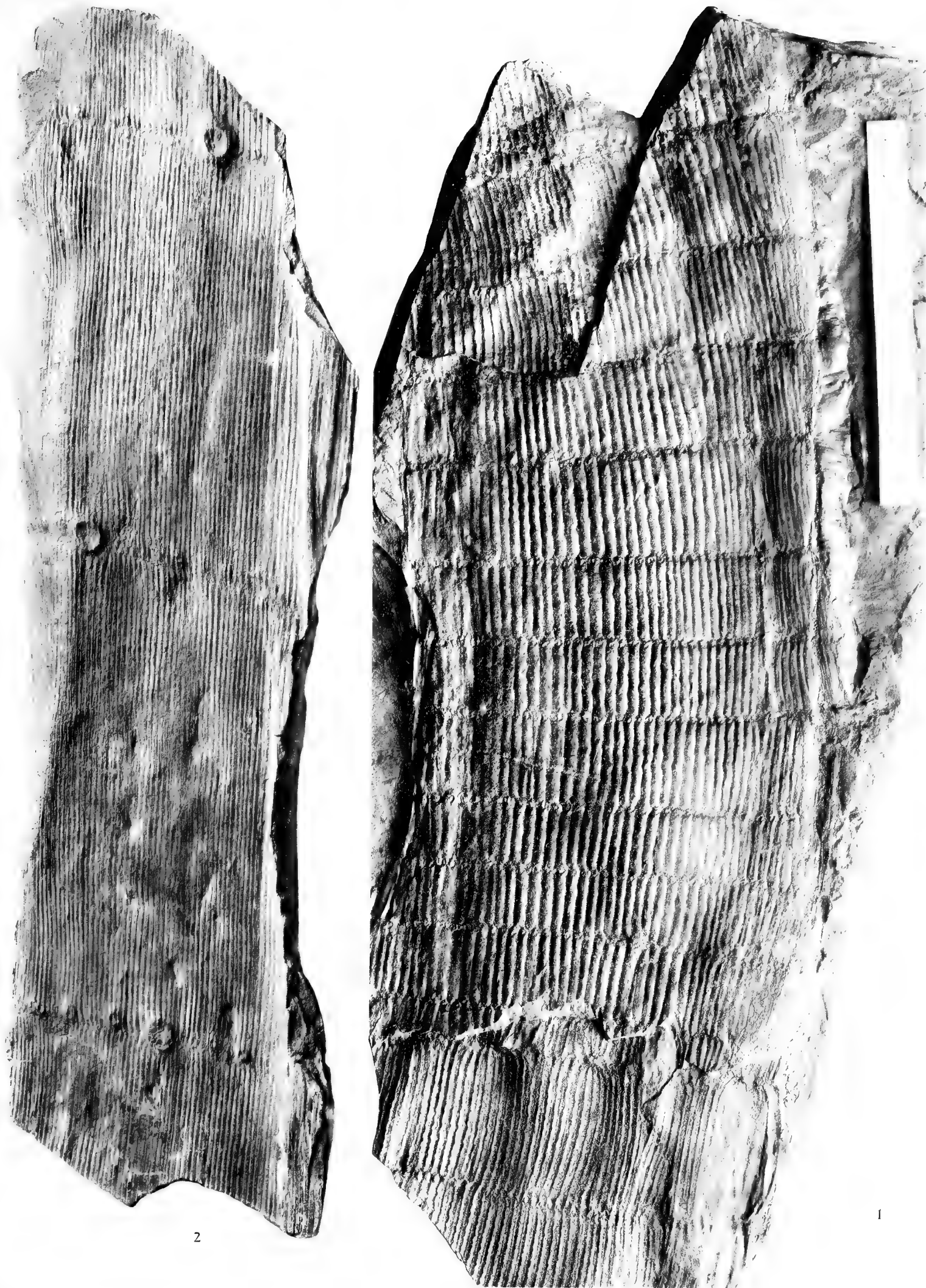












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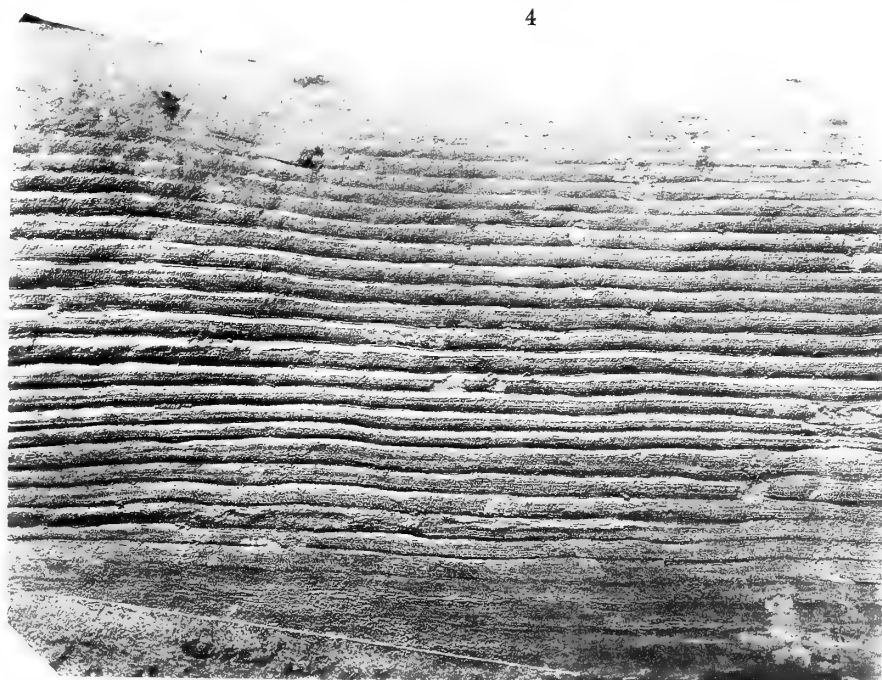
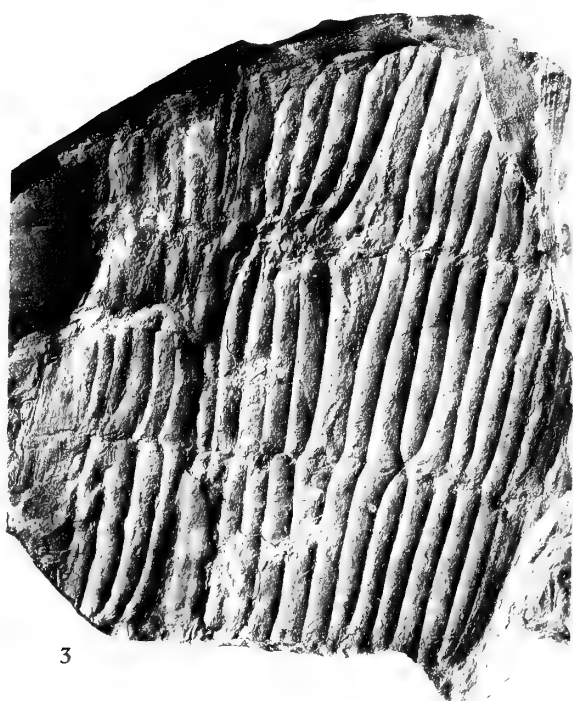
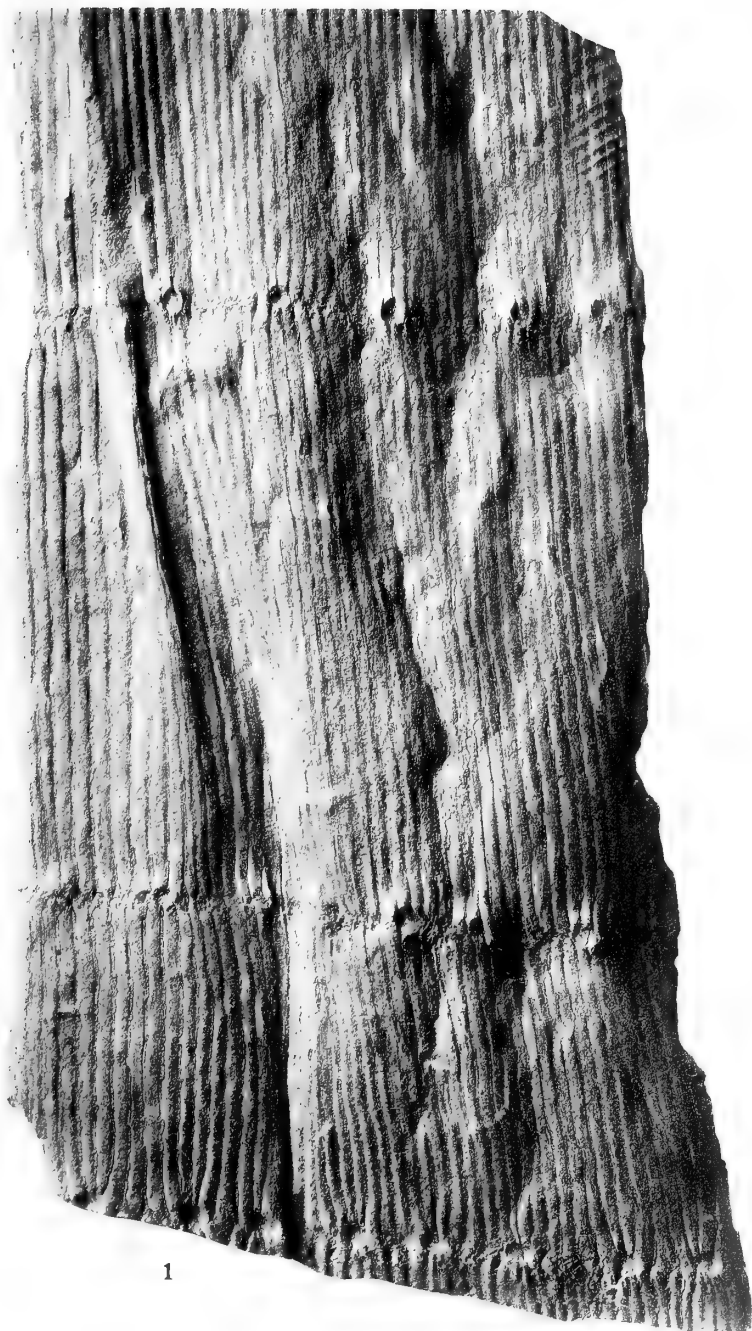
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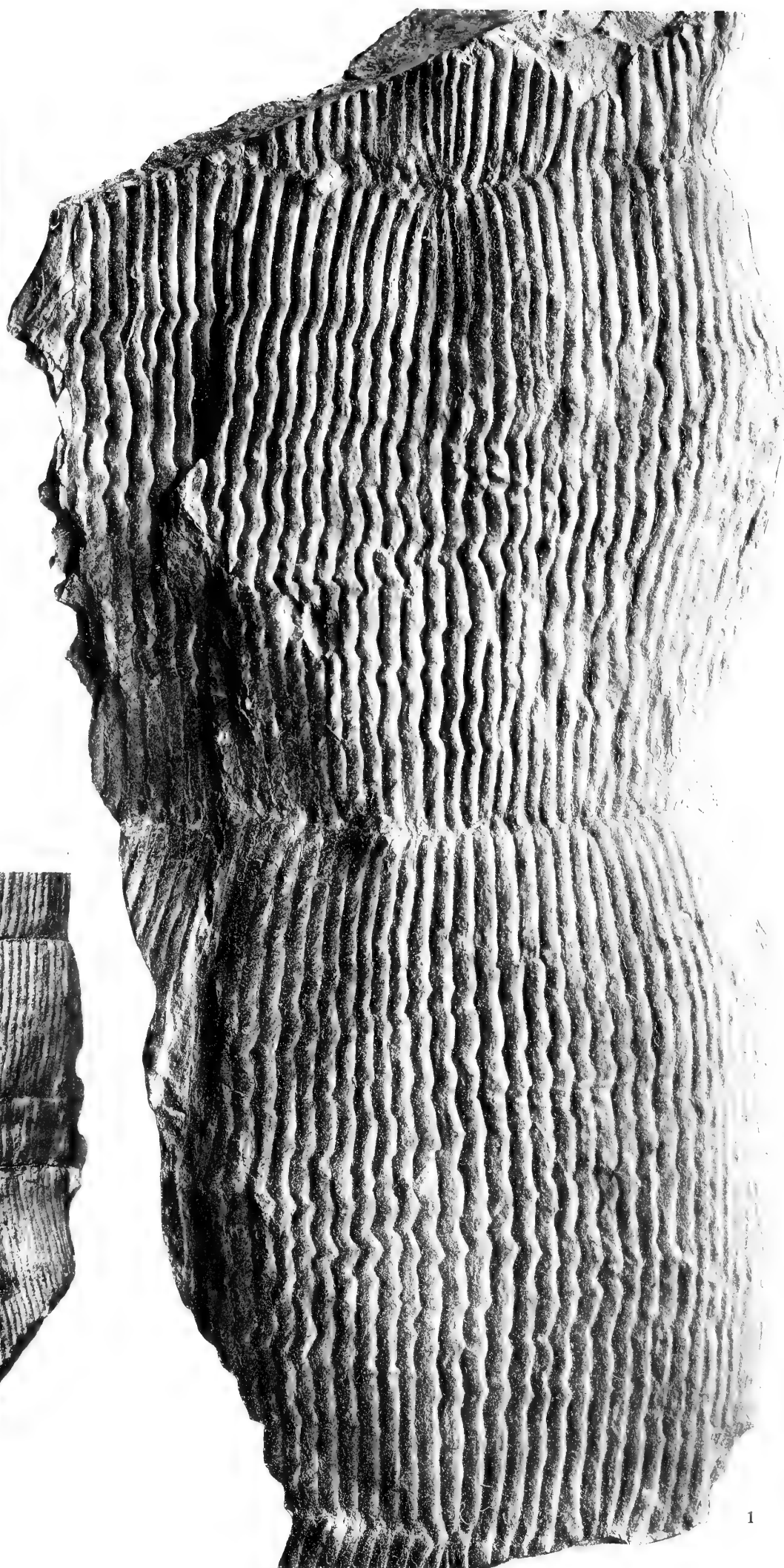
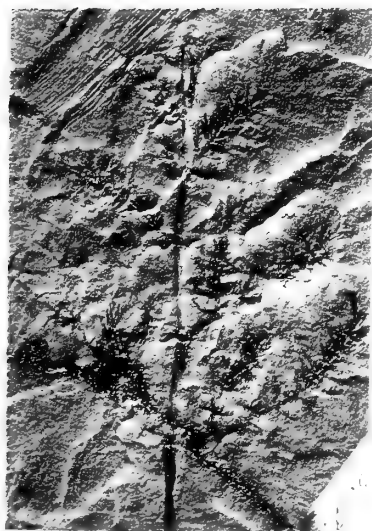
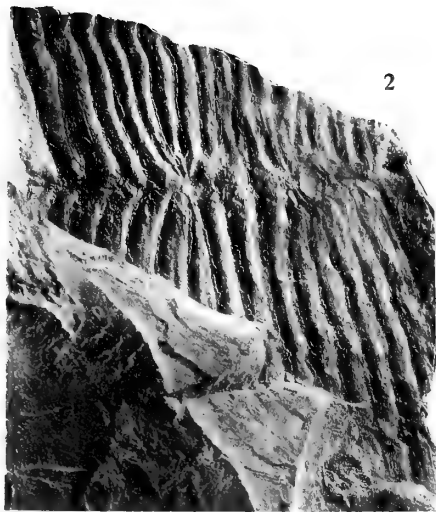






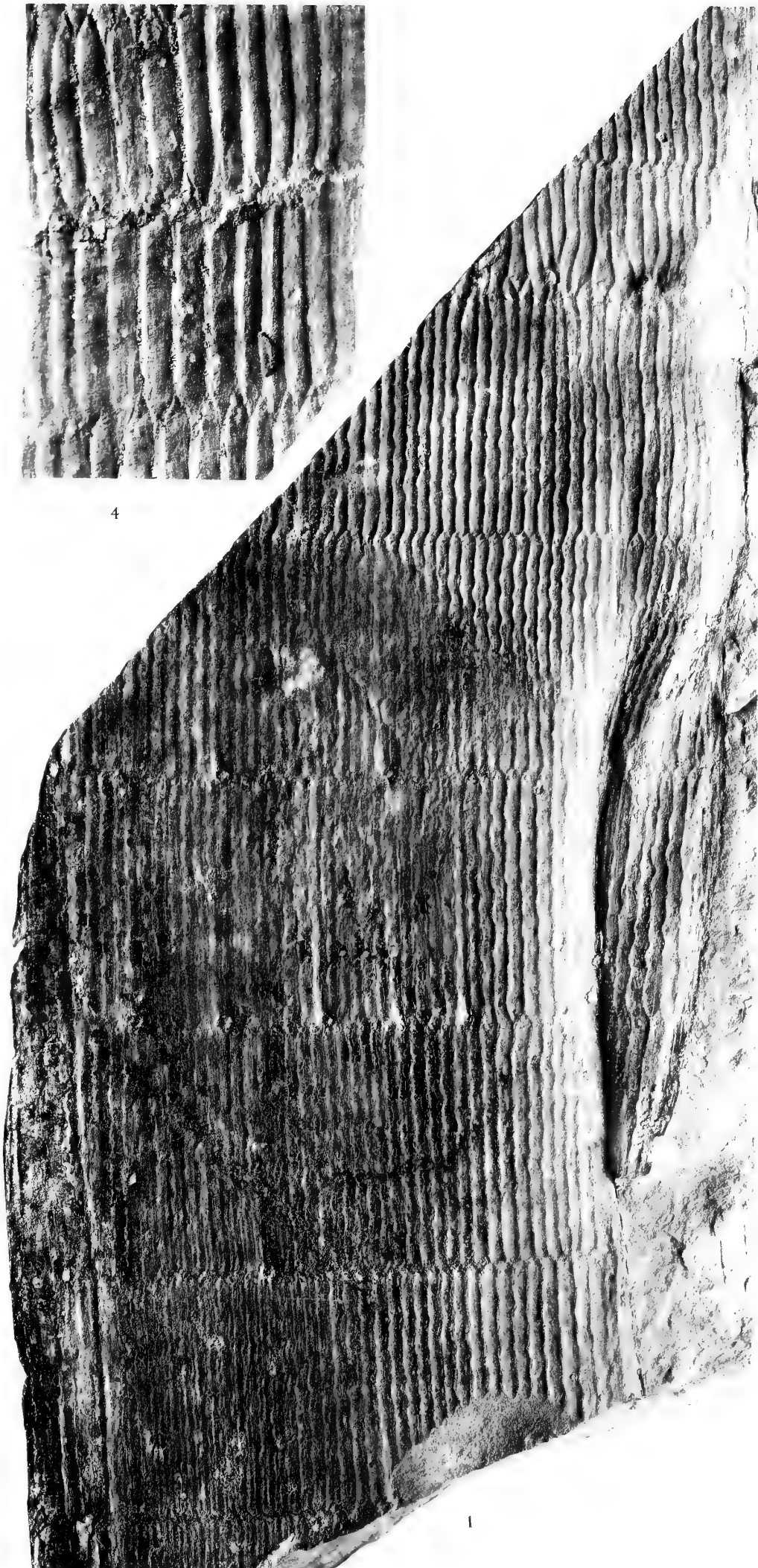
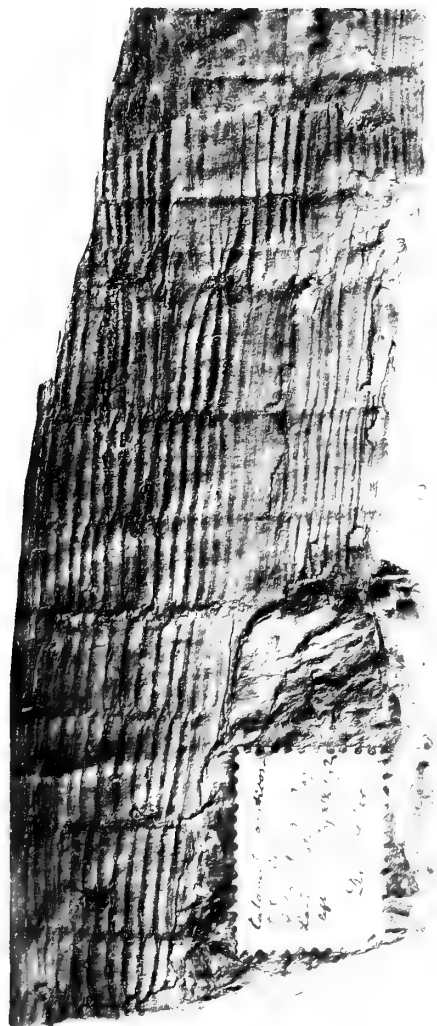






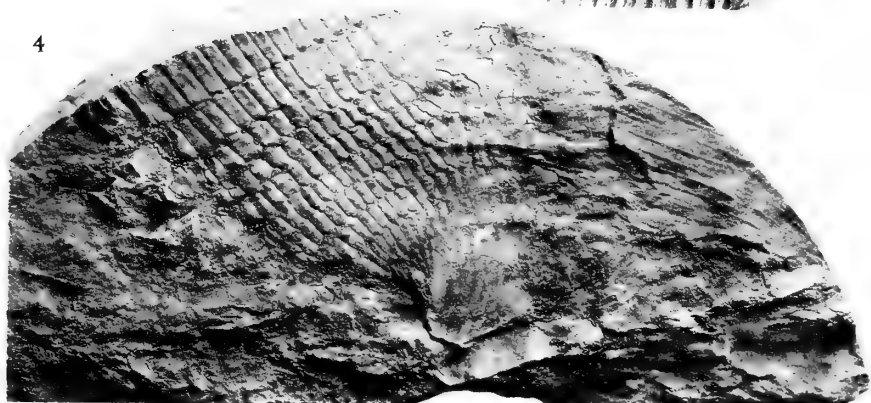
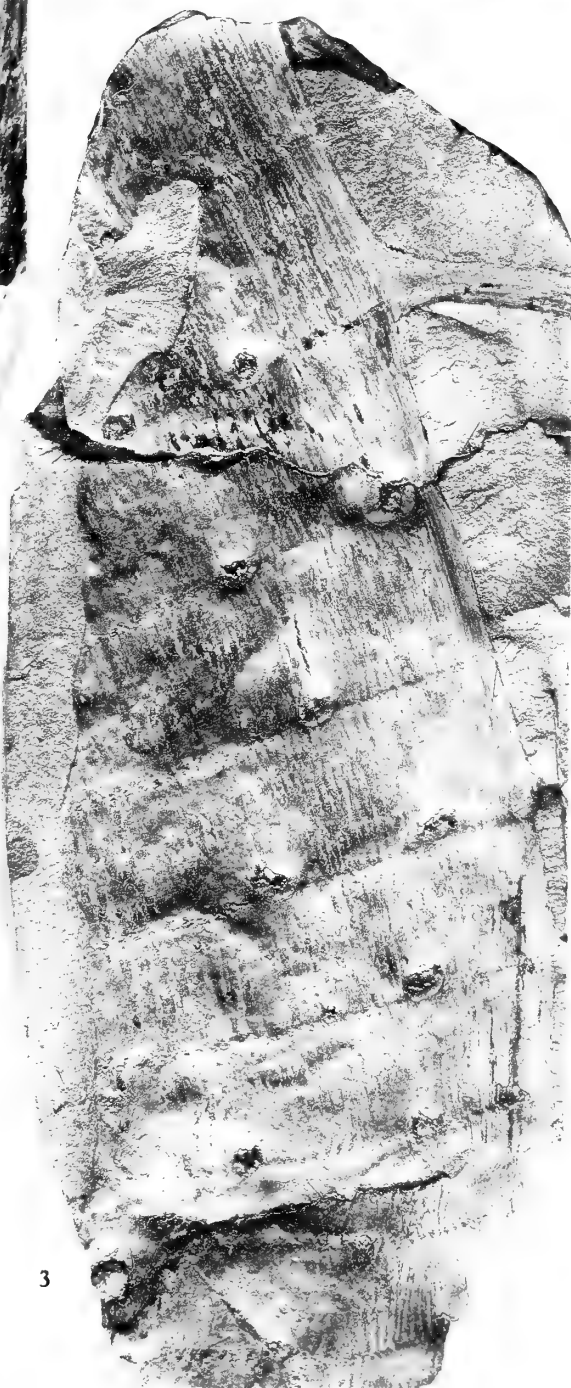
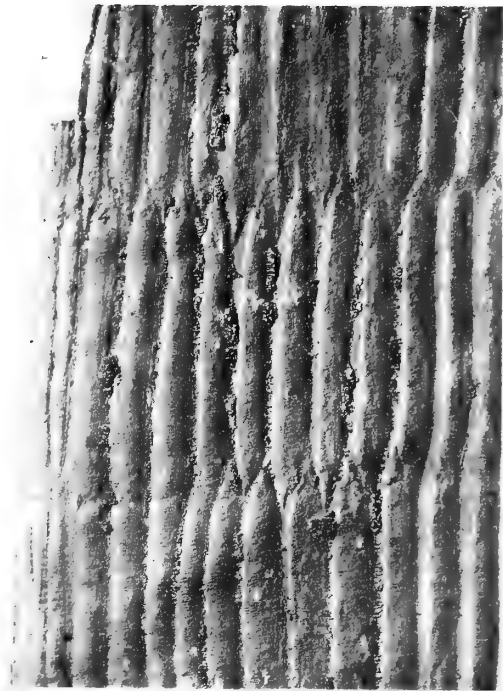
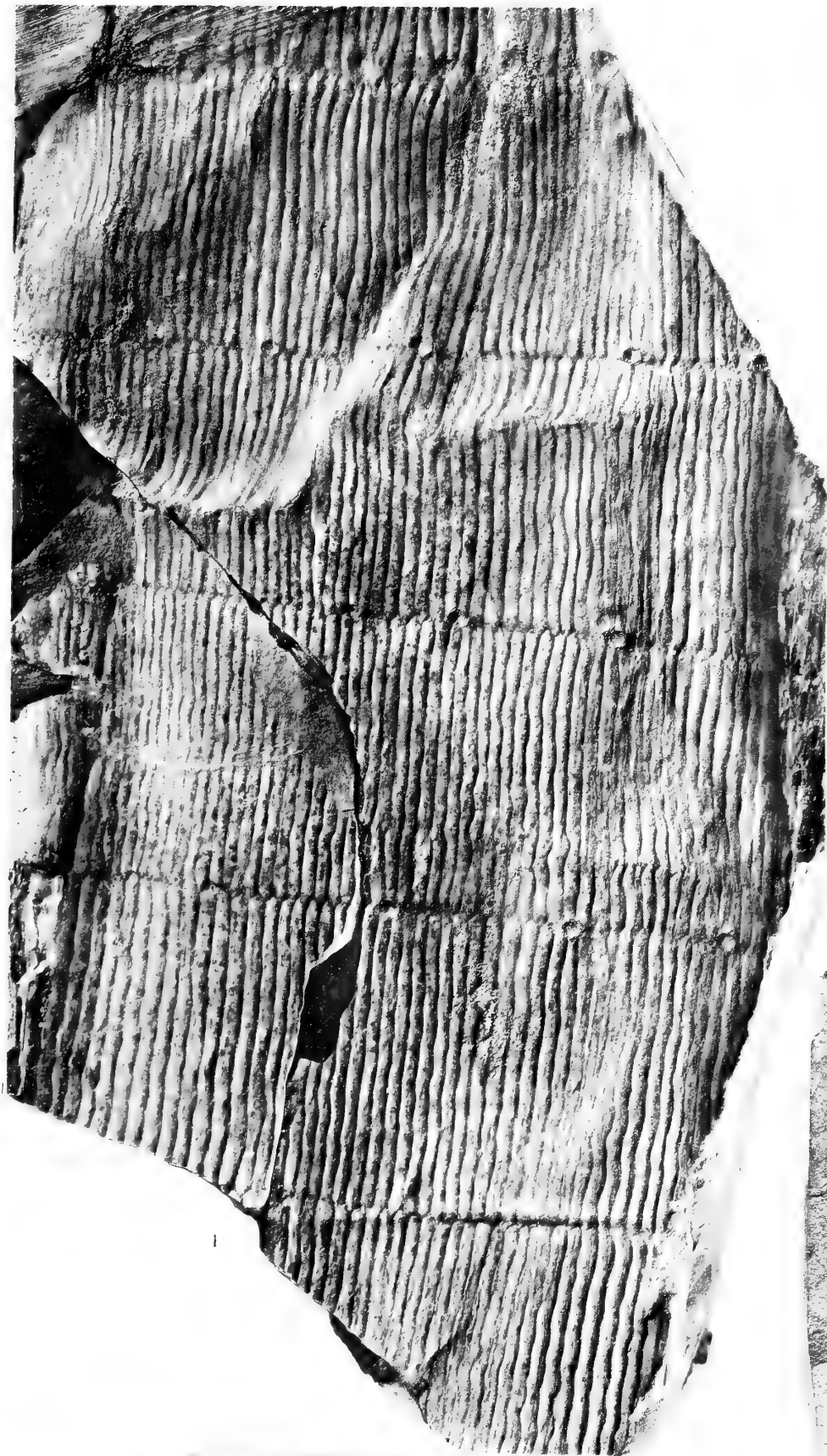








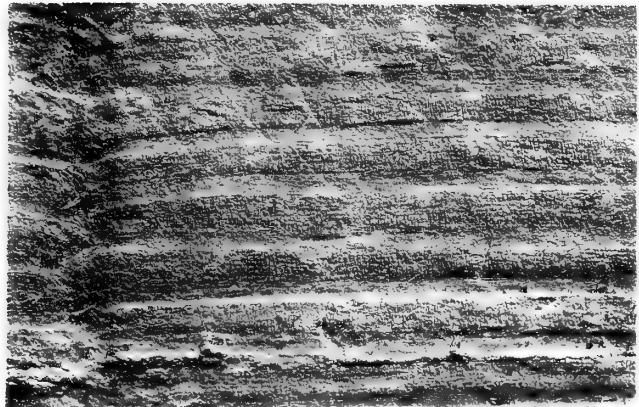




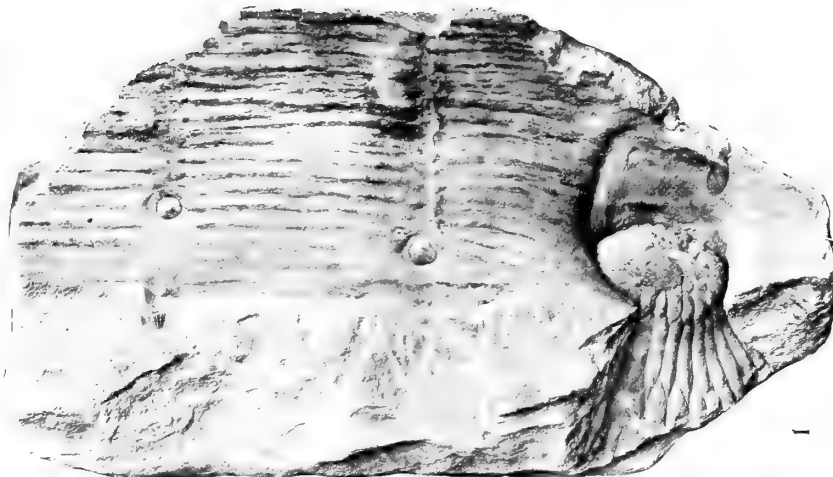
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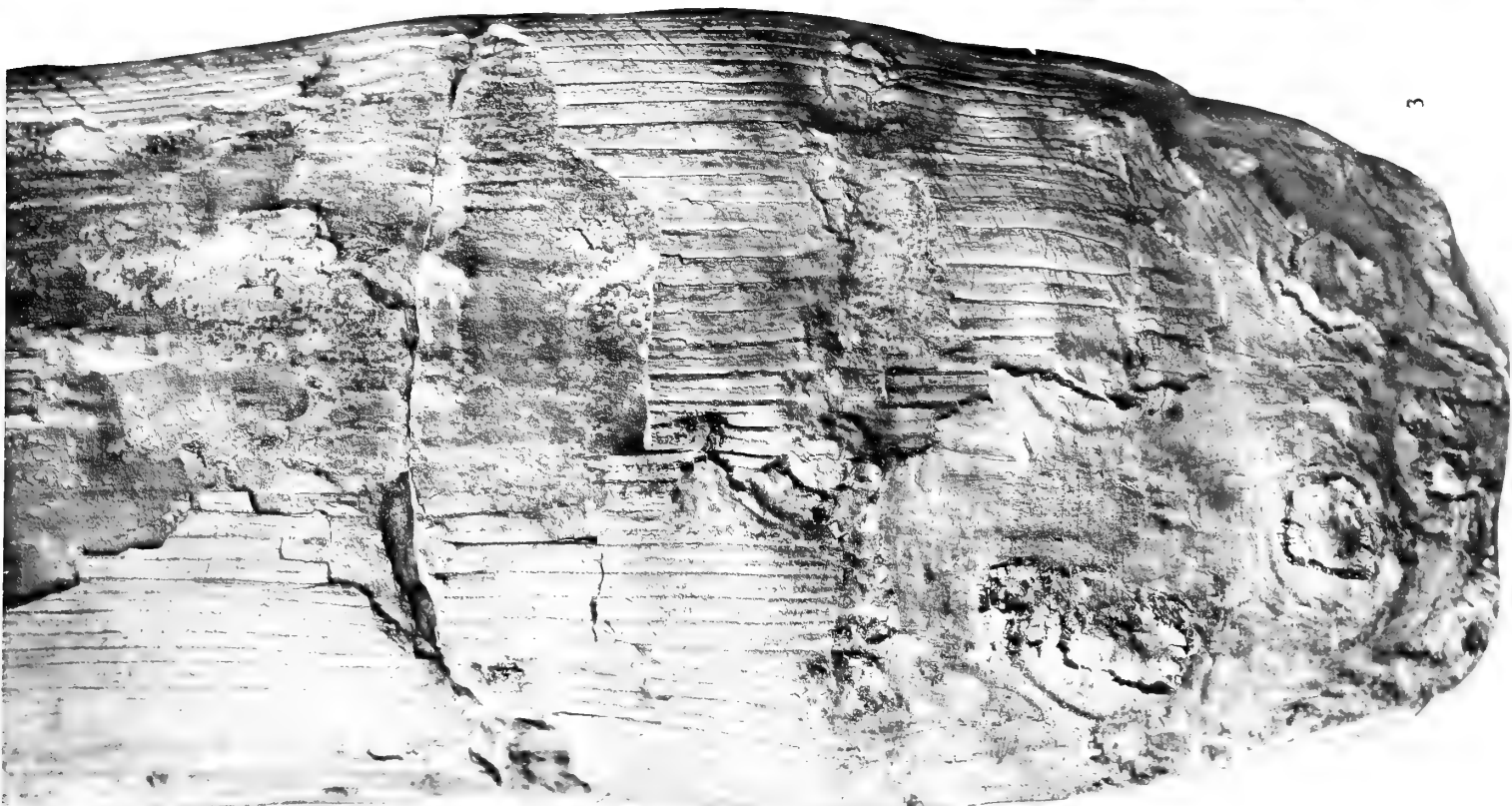




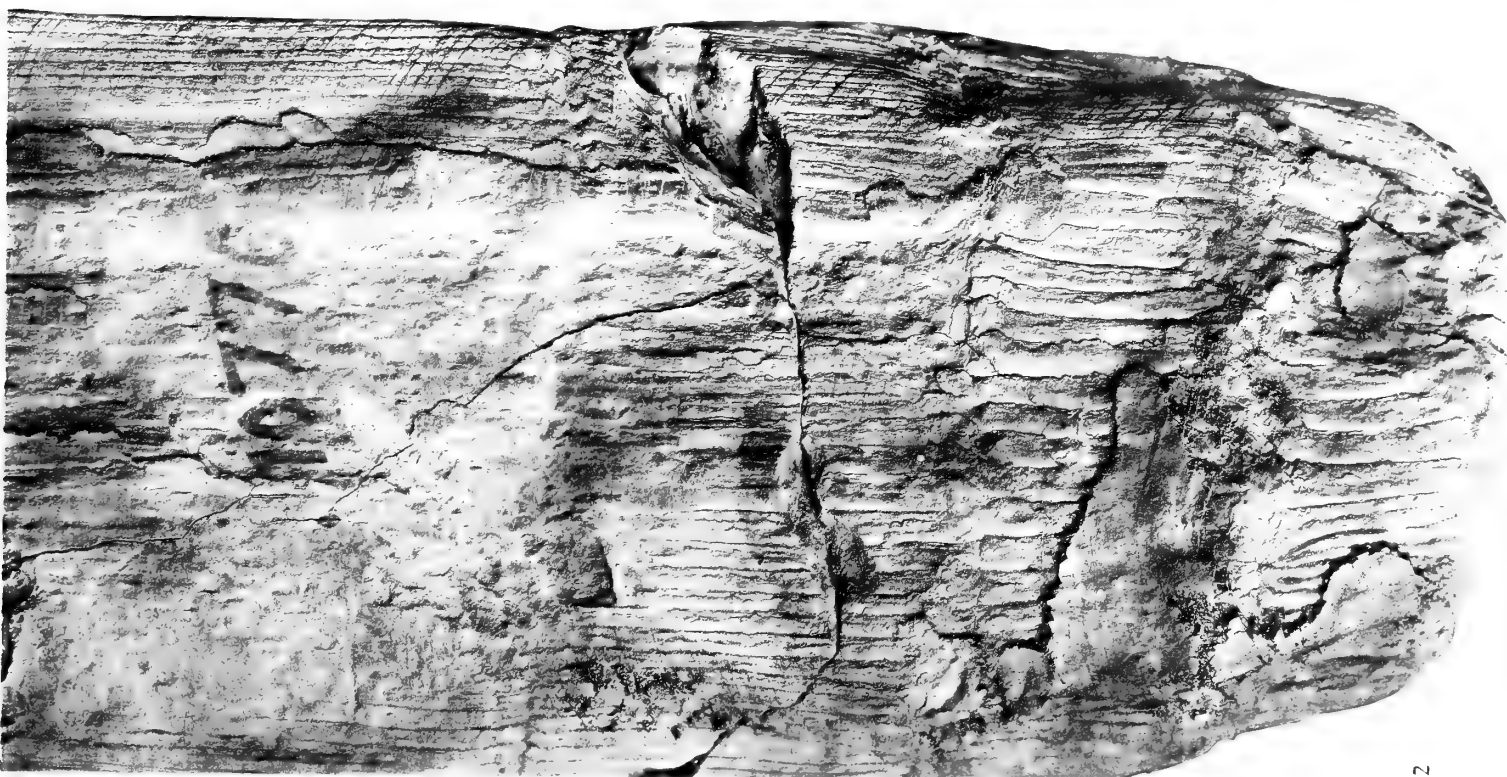
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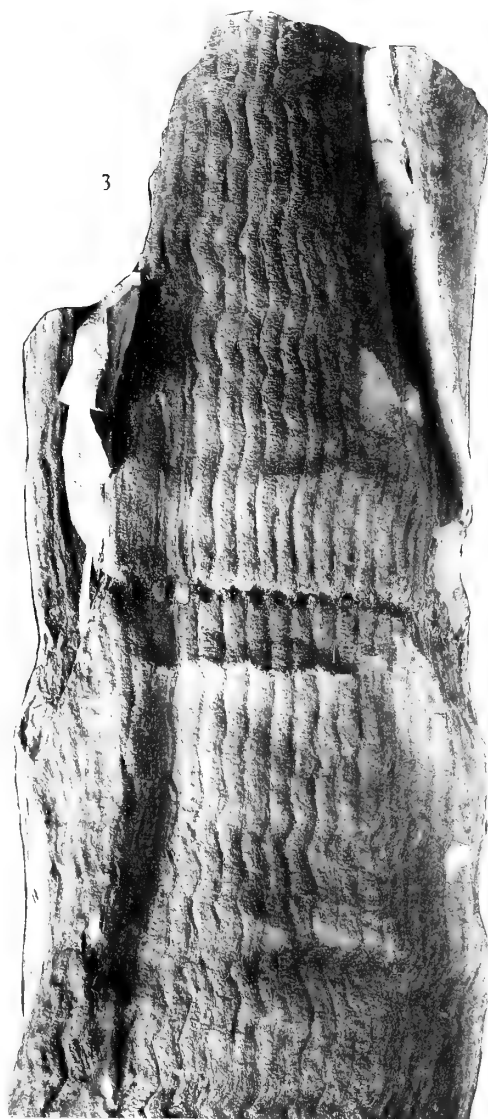
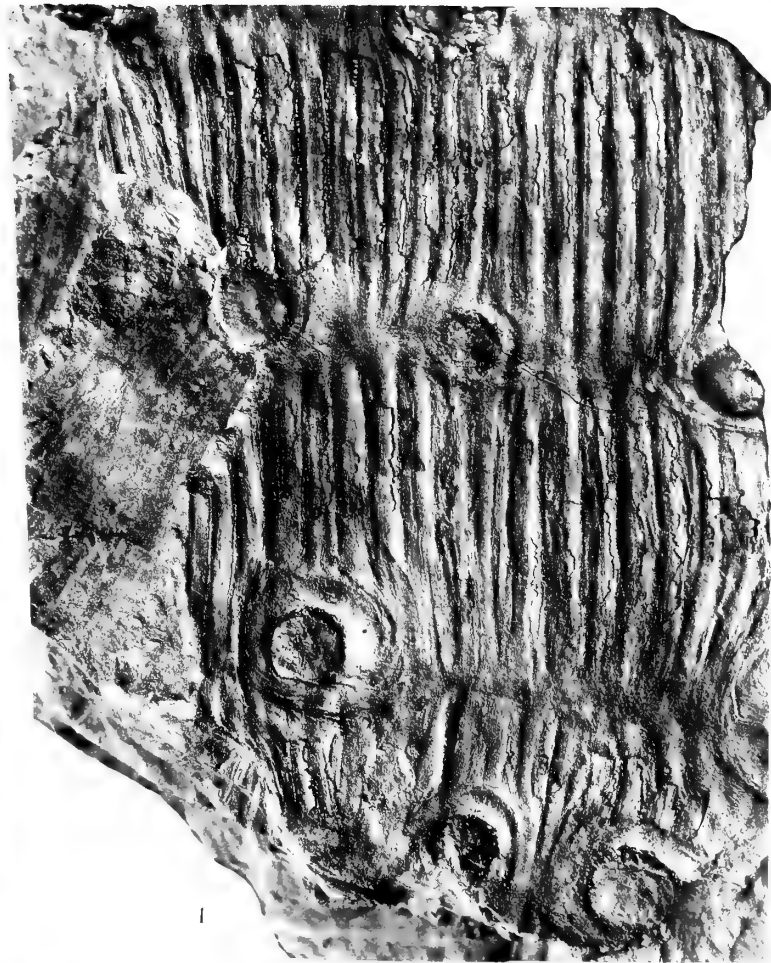
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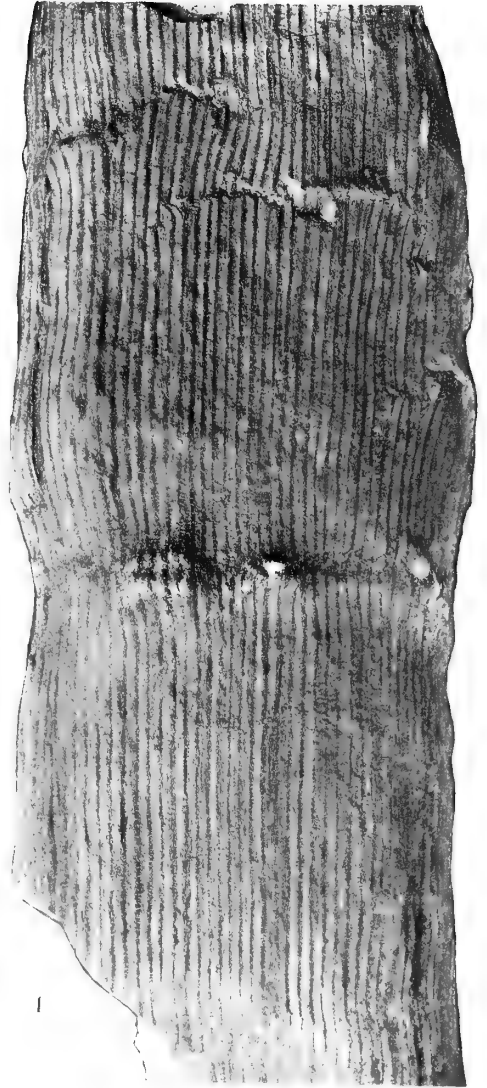




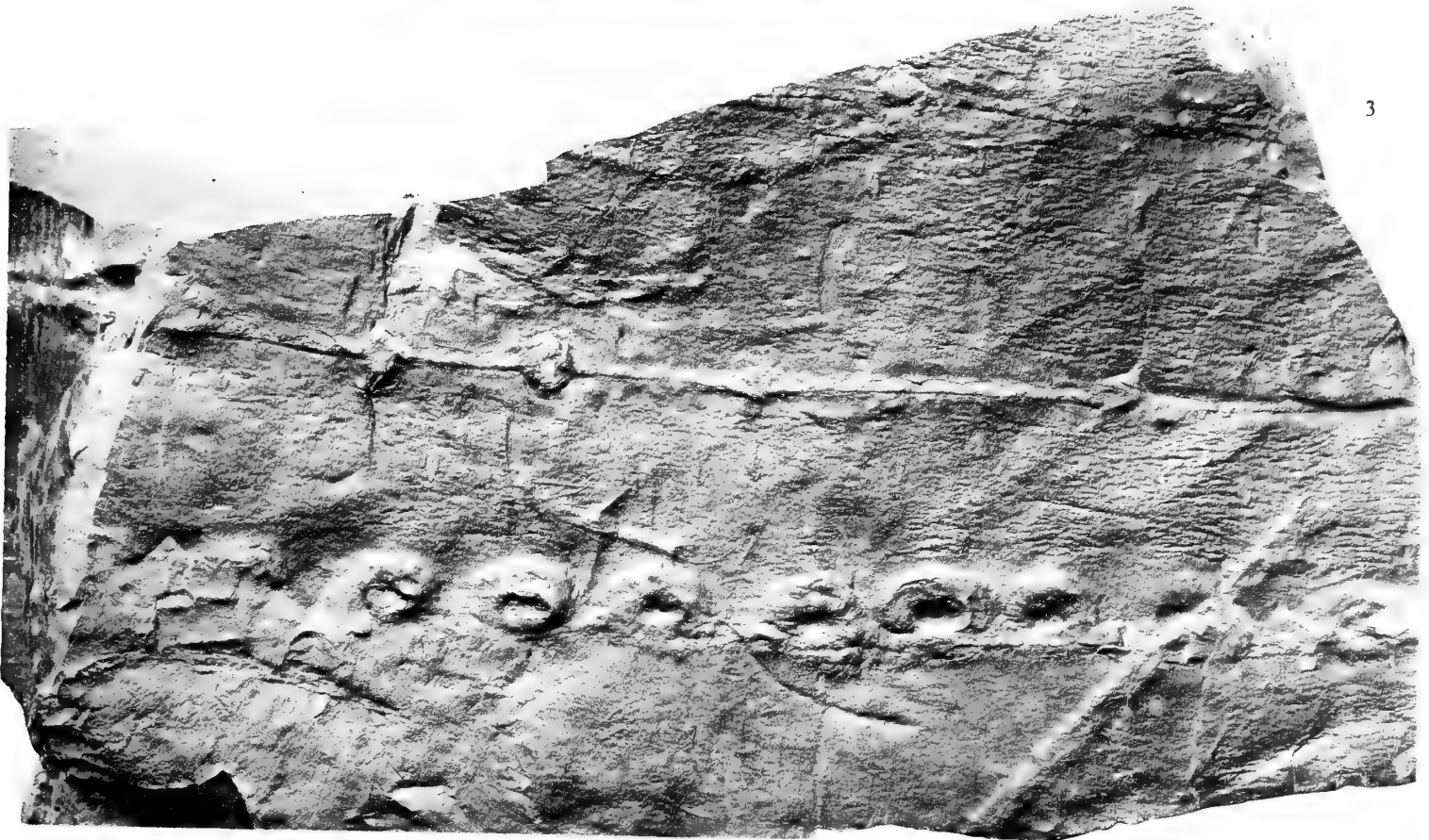




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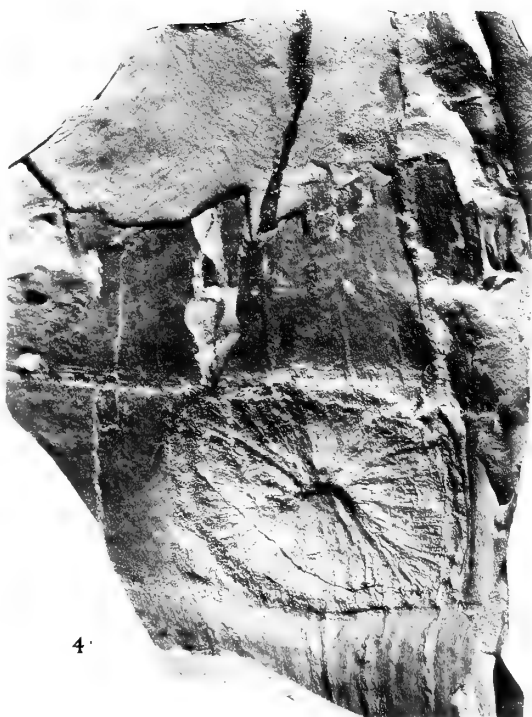
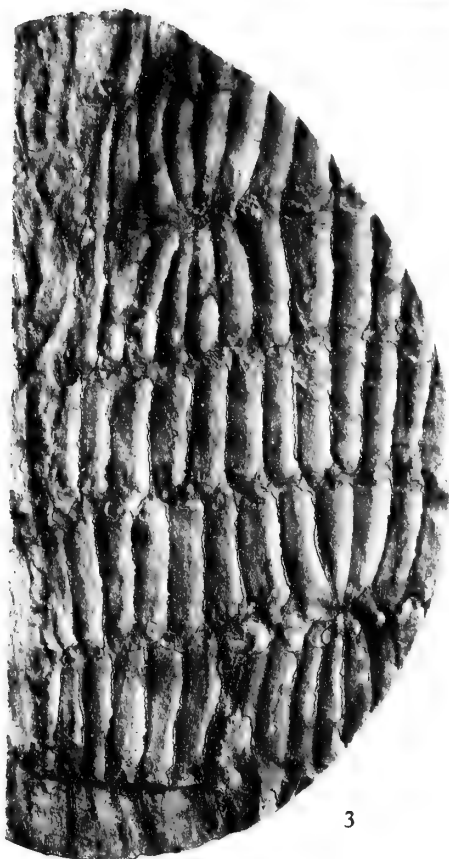


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*C. g. ...*

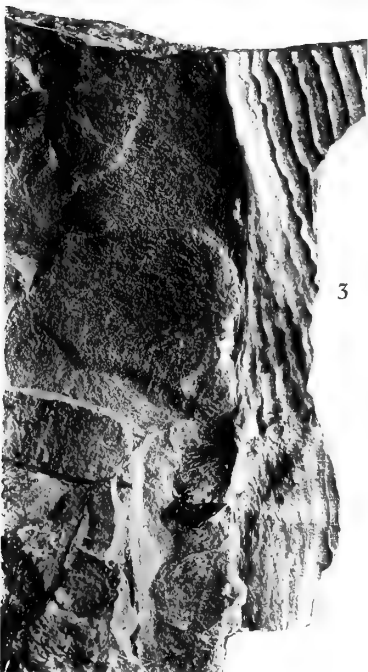
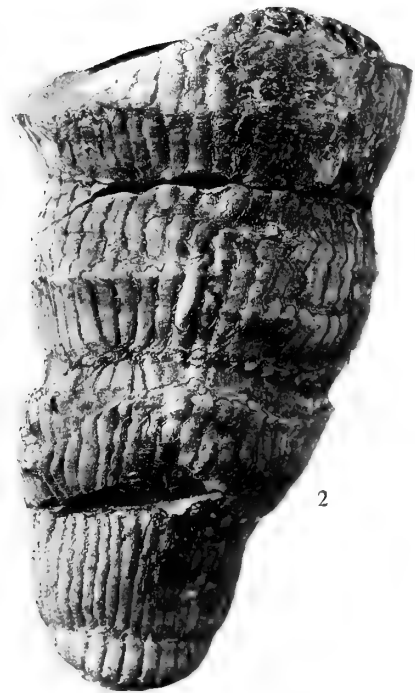
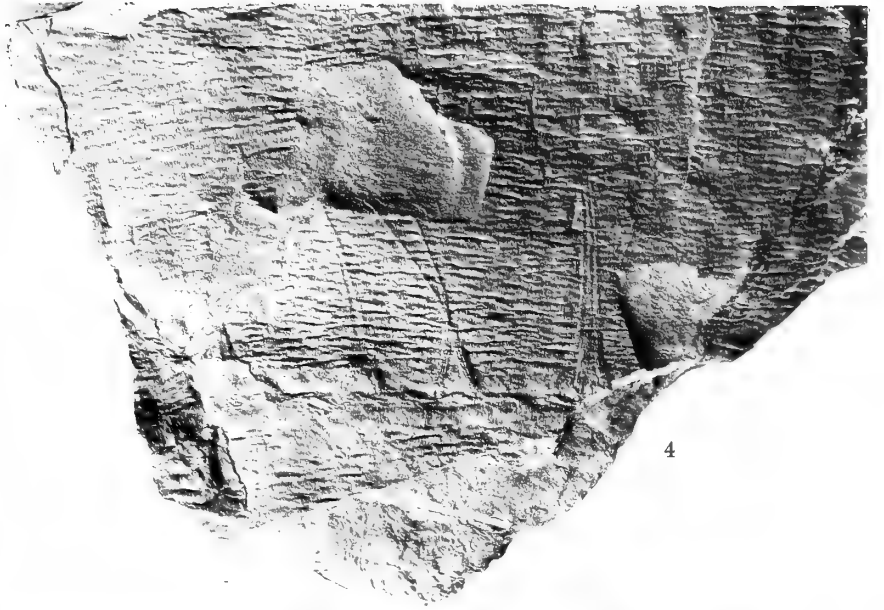




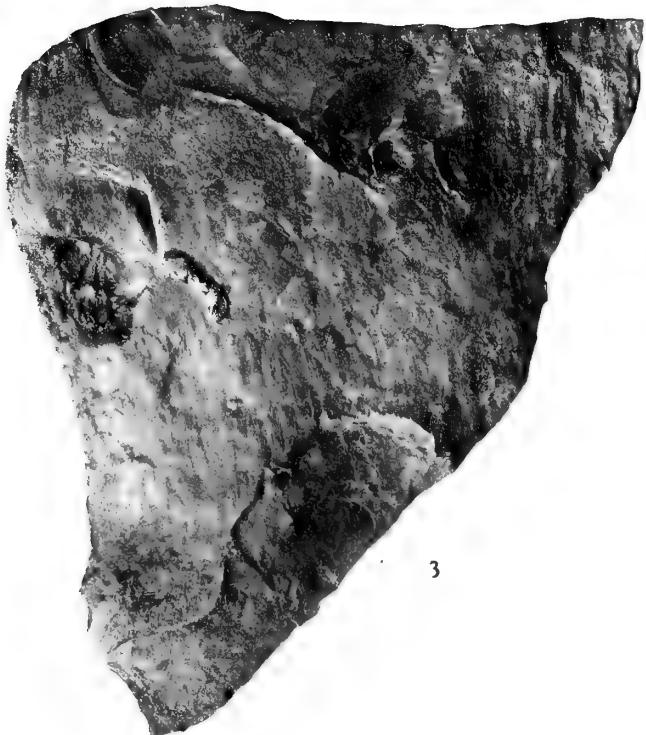
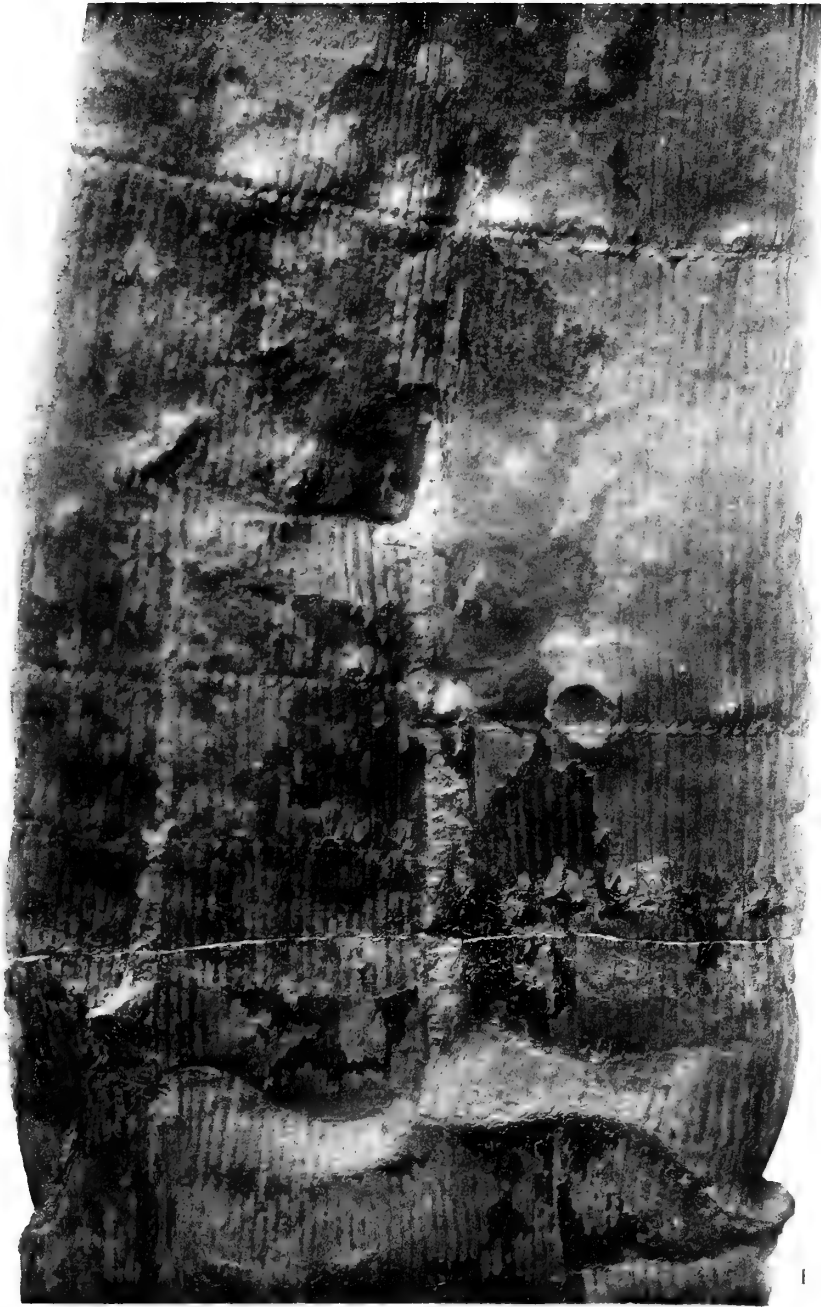






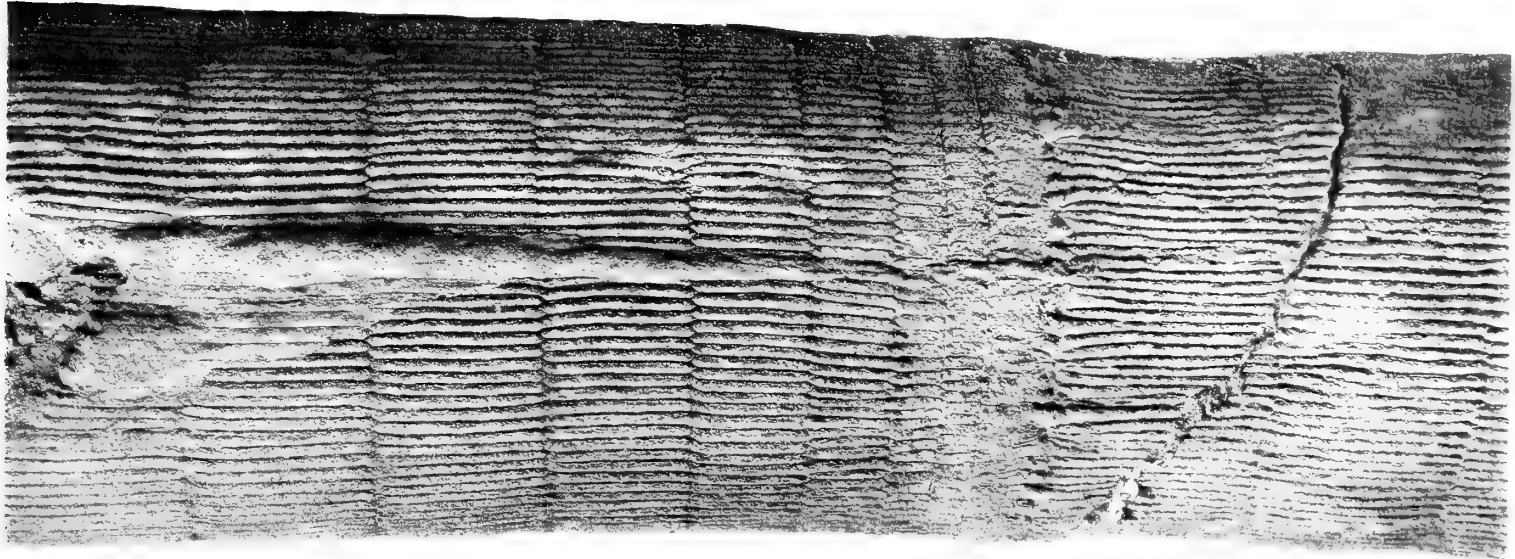




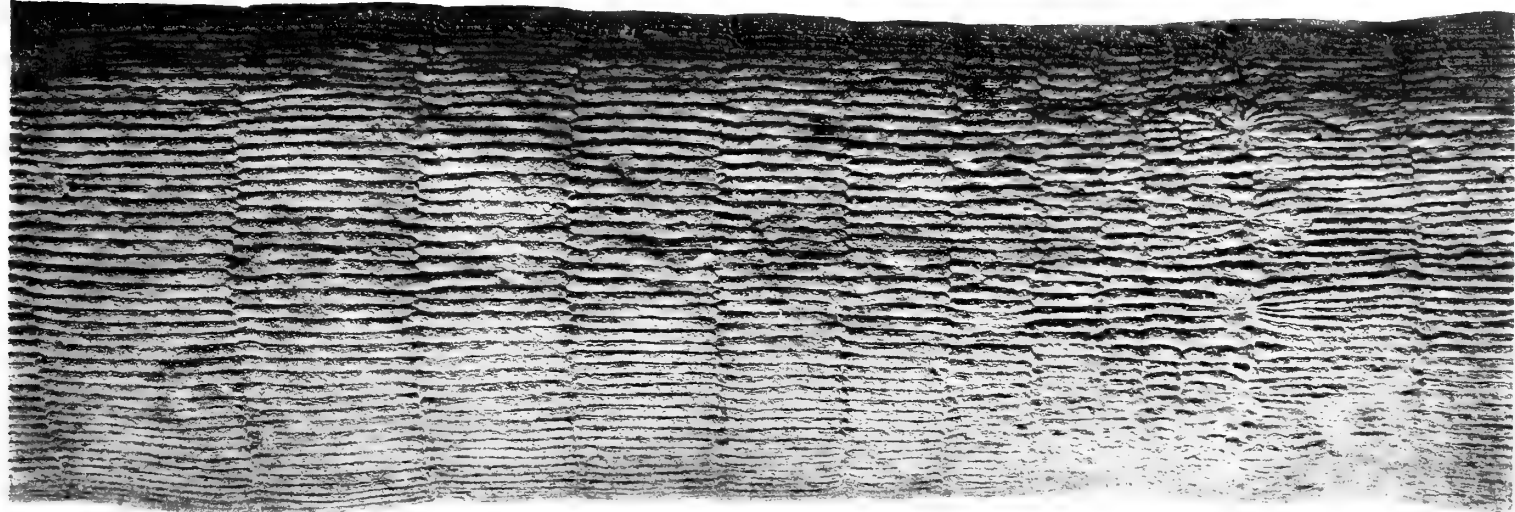




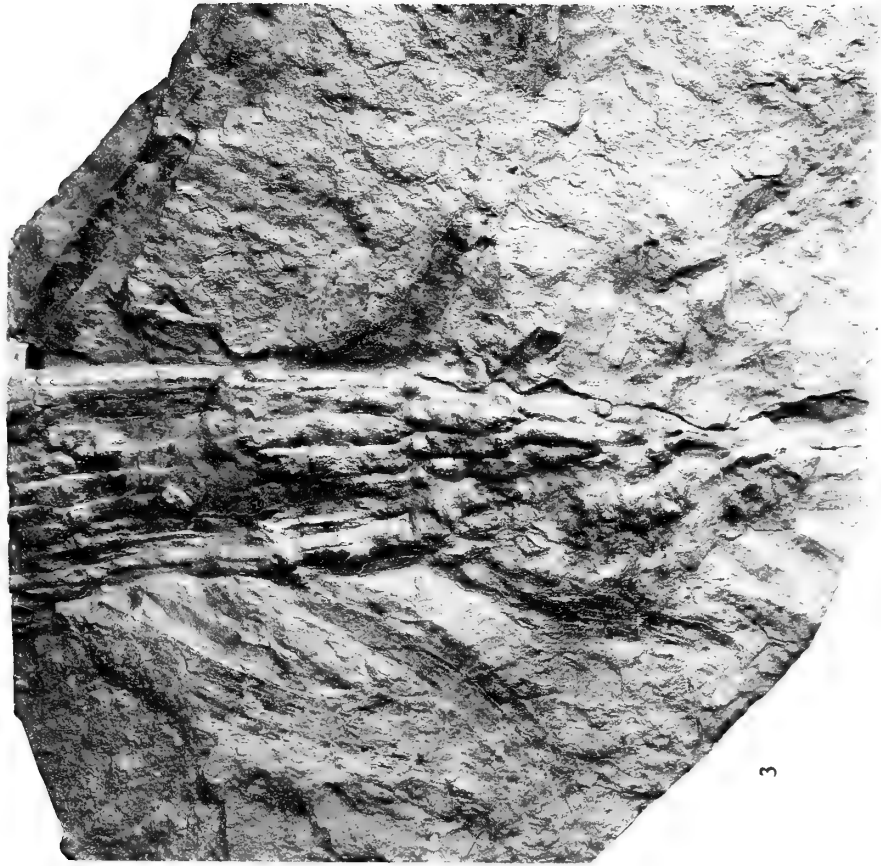




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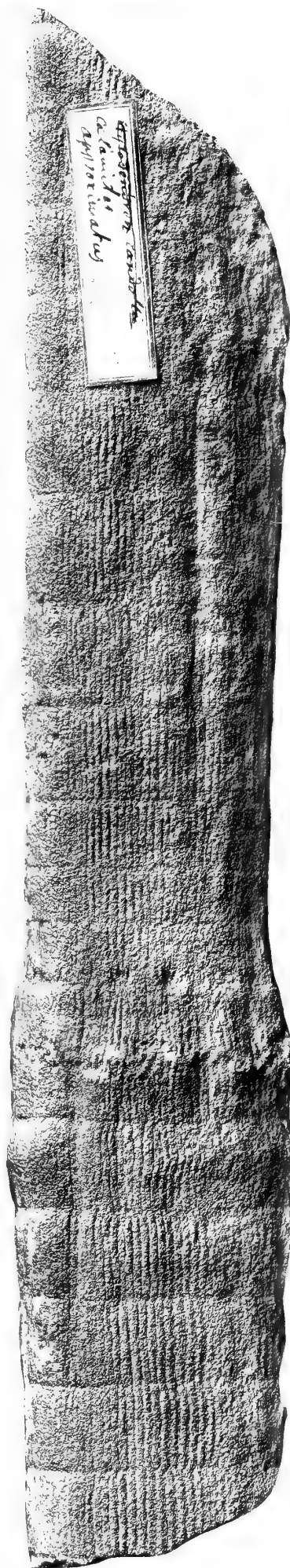
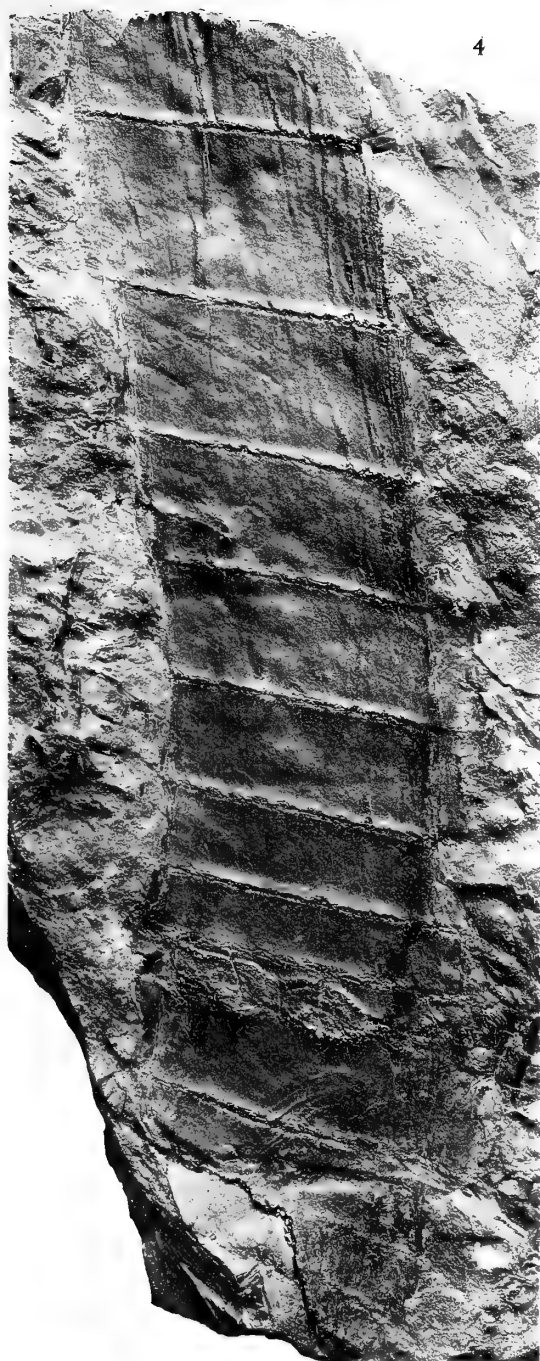


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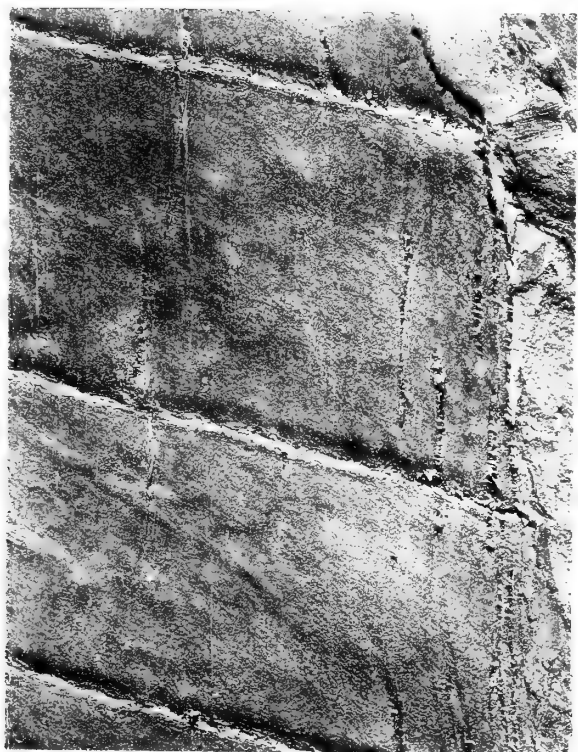
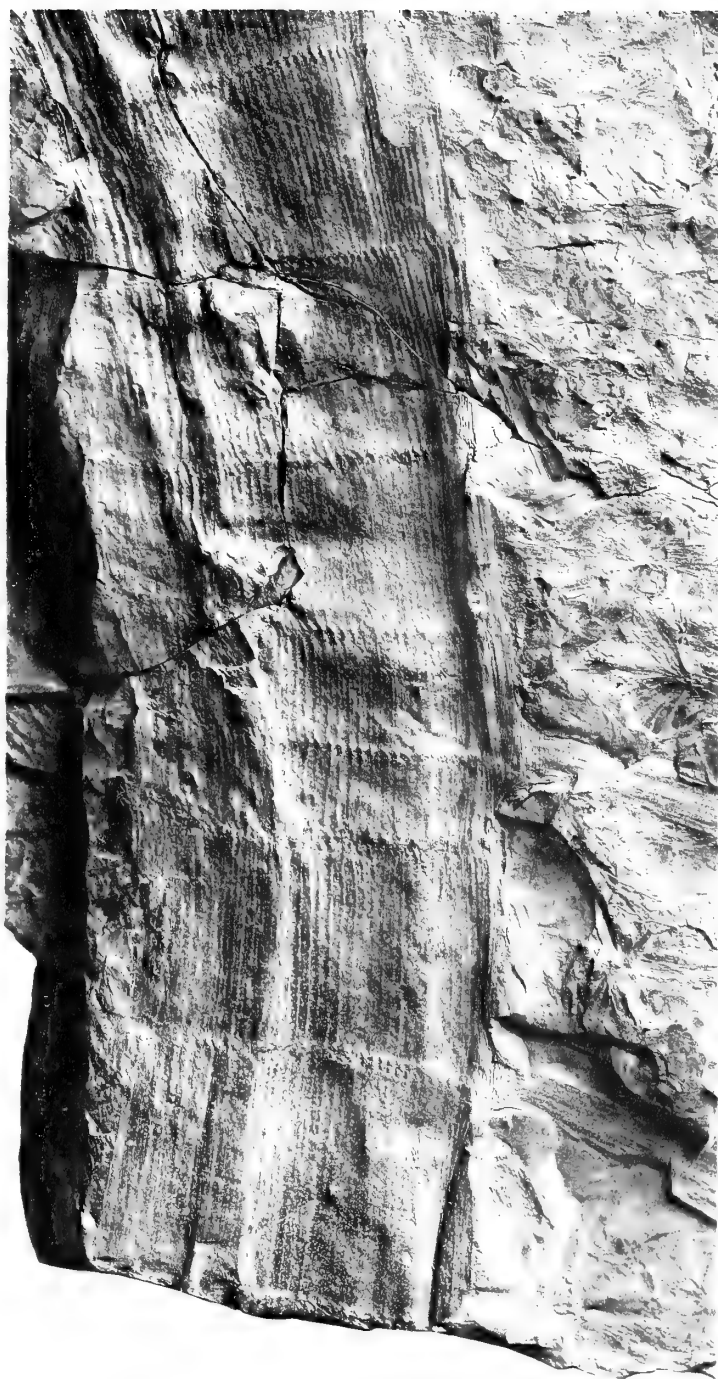
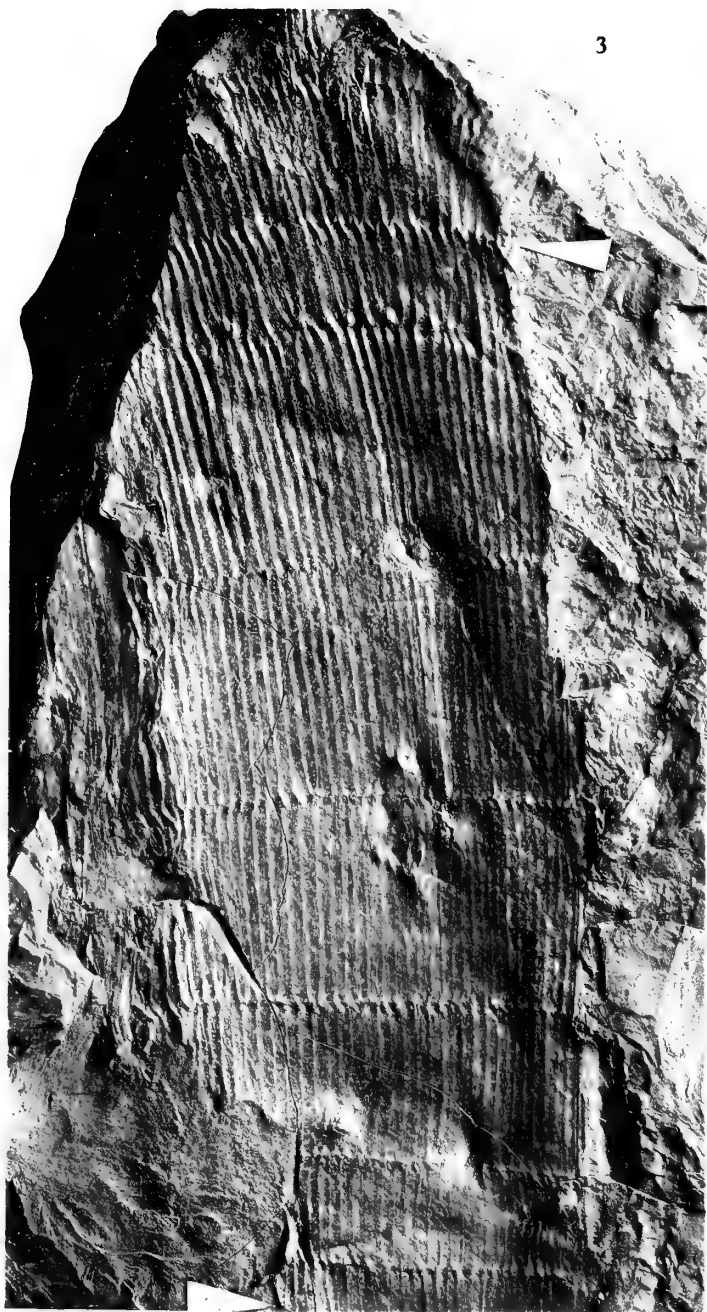
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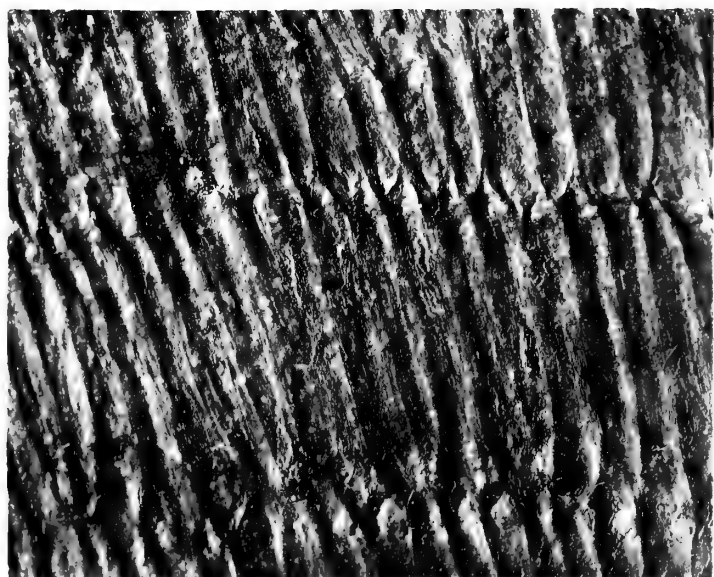
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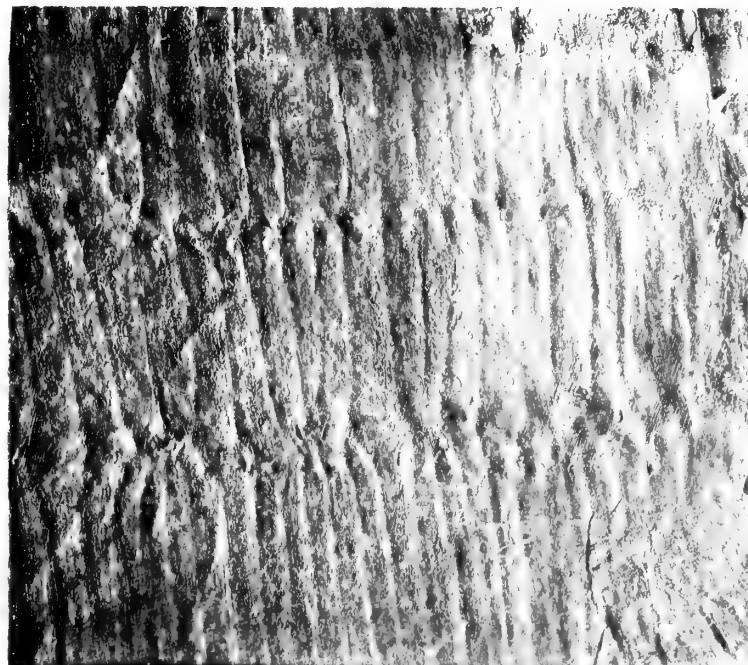
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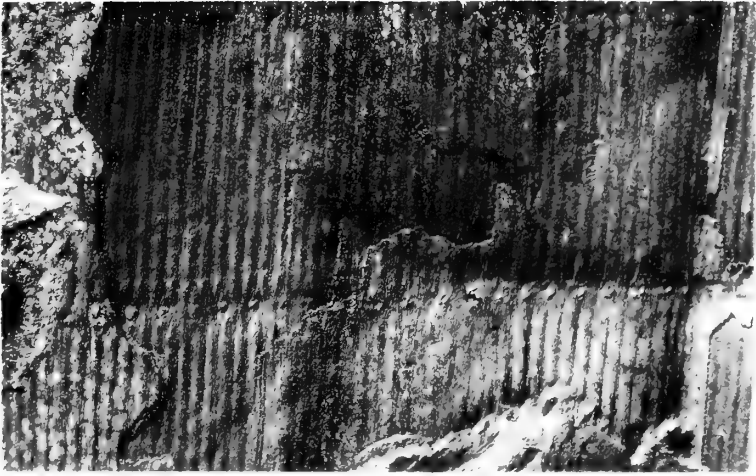








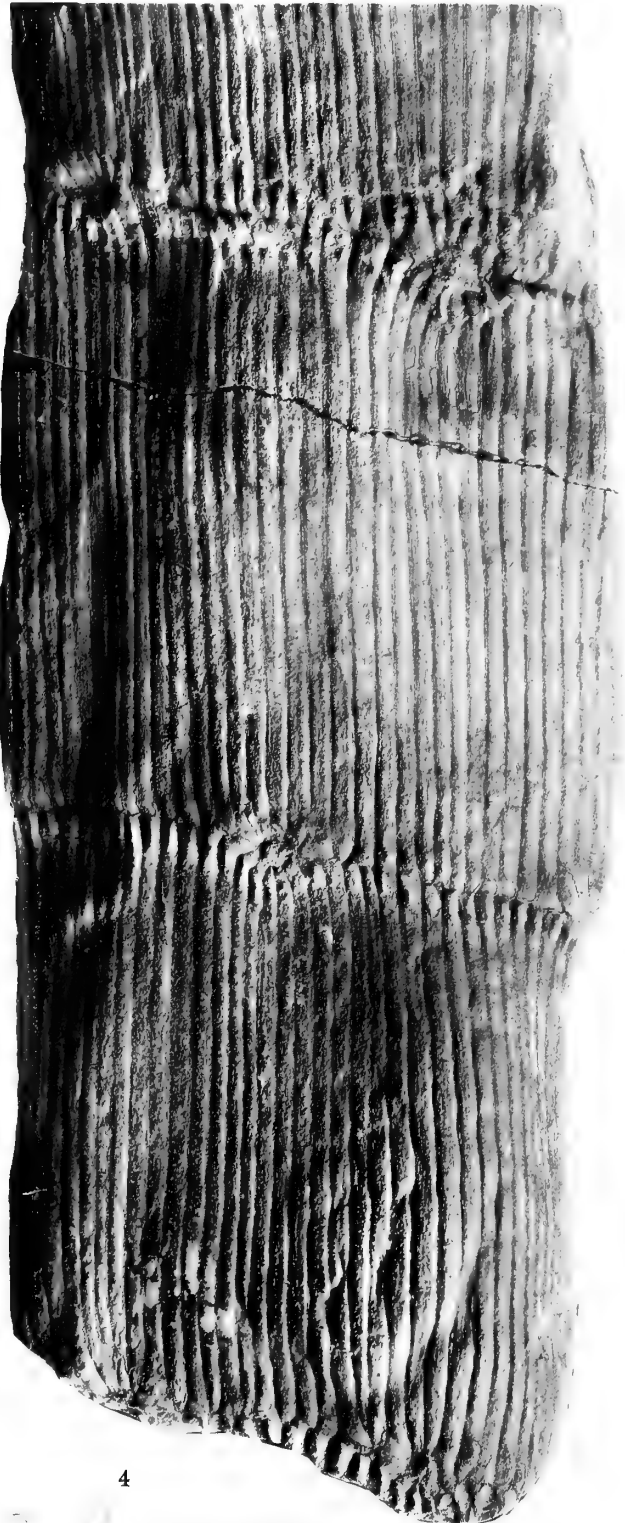




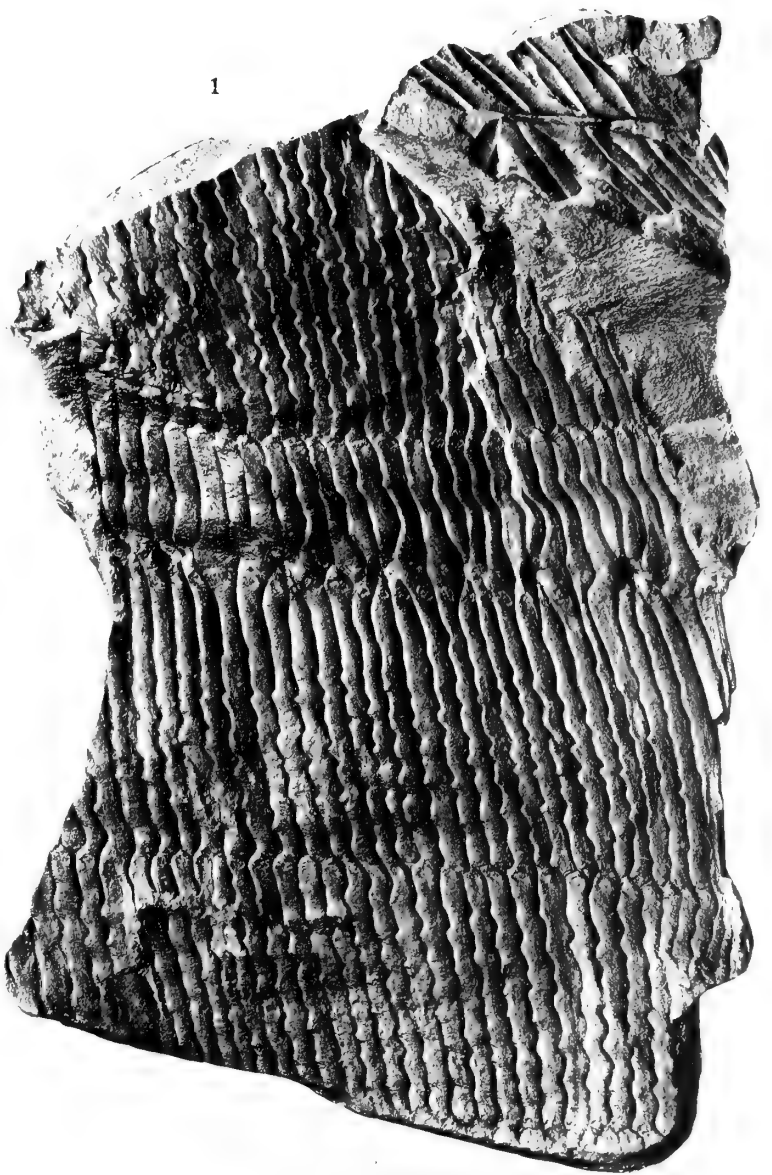
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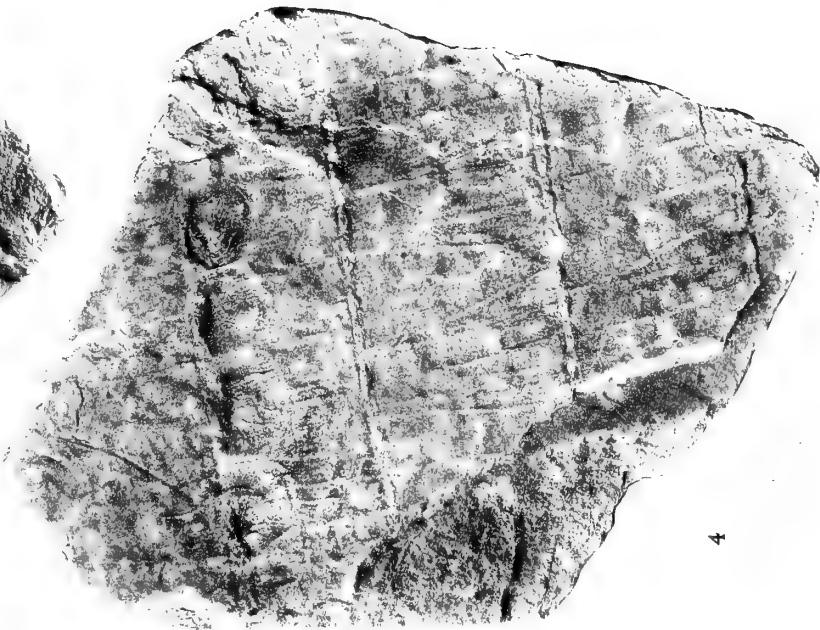
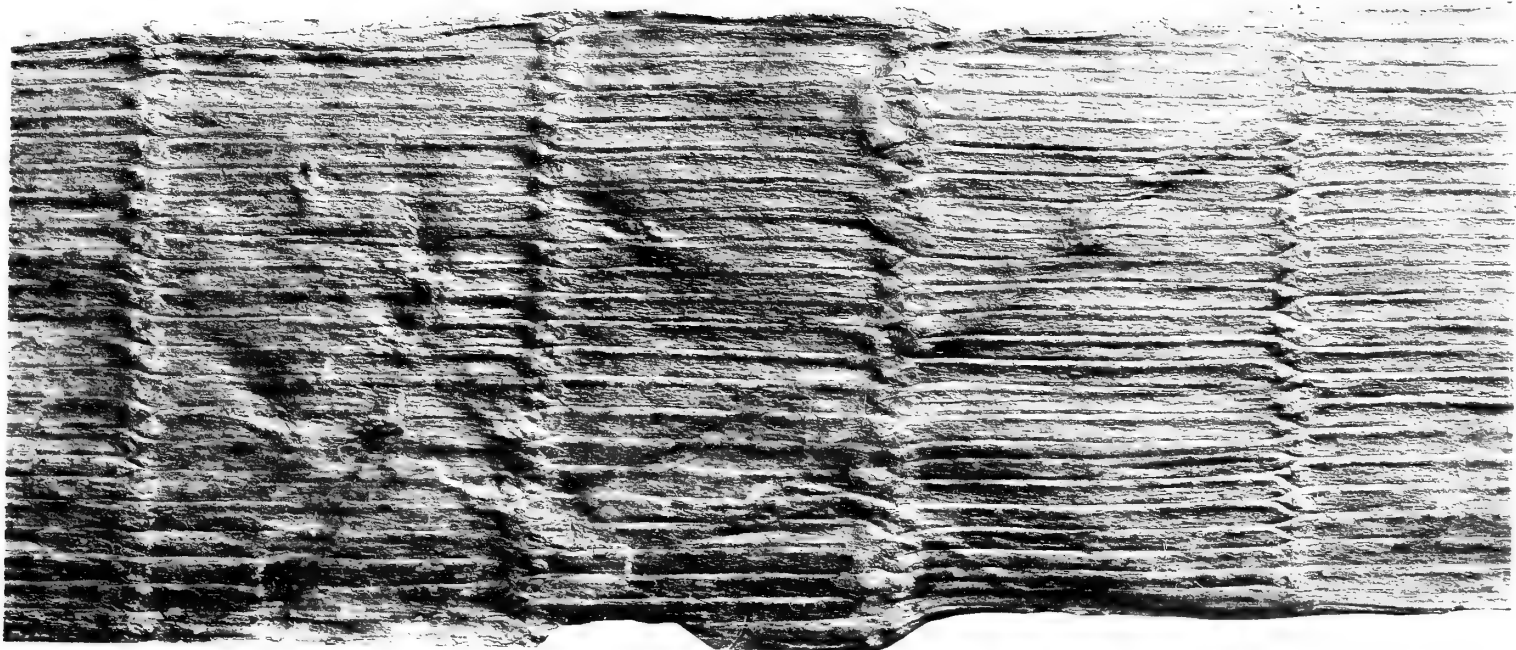
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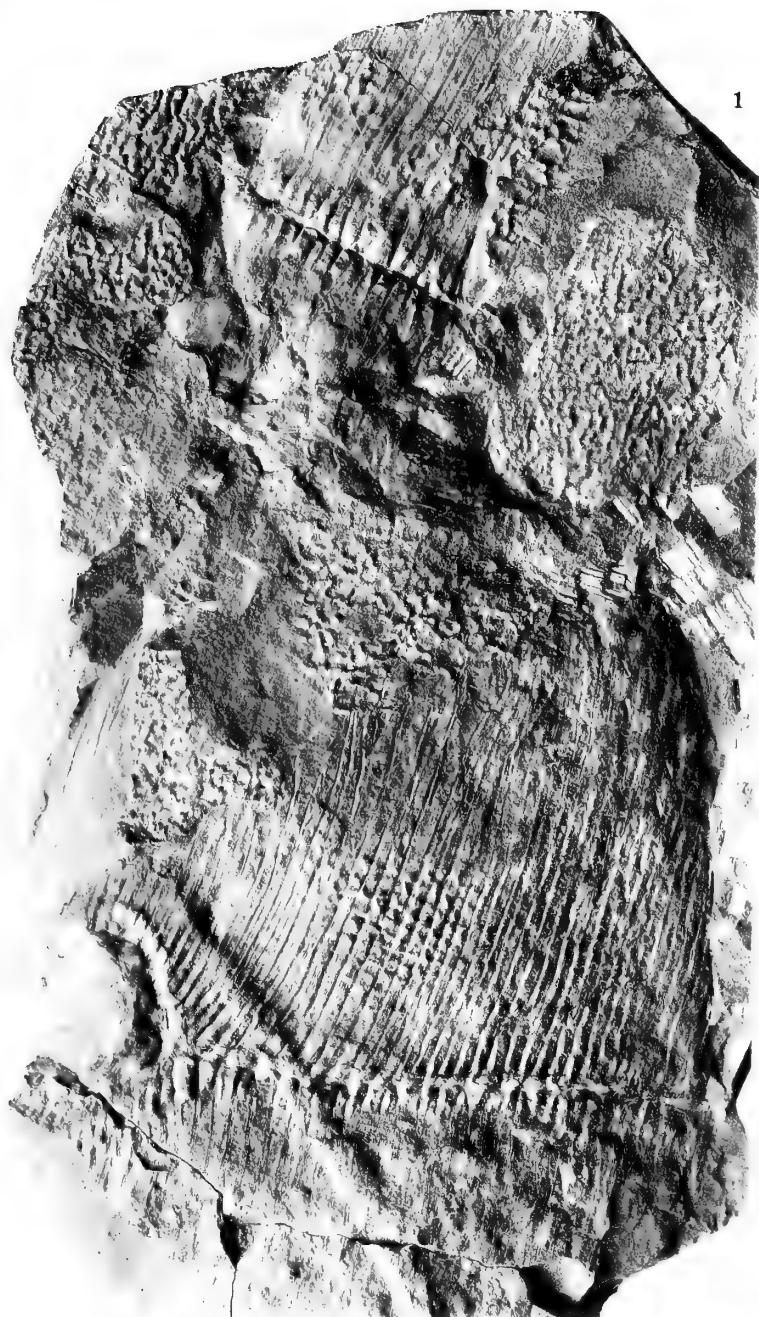
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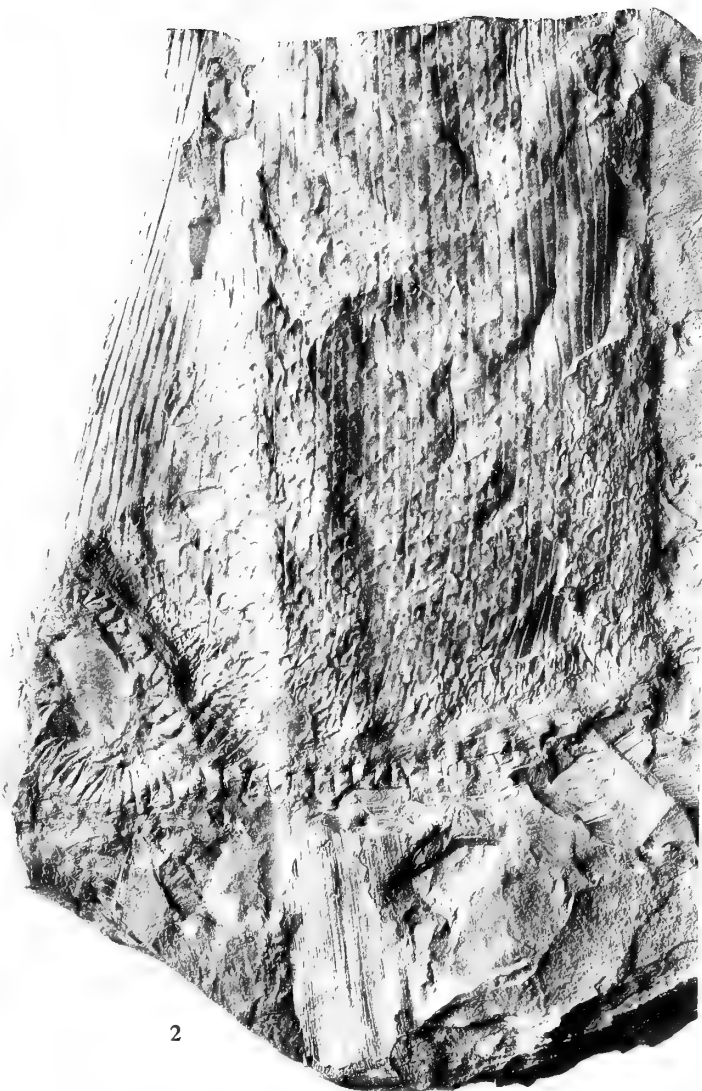




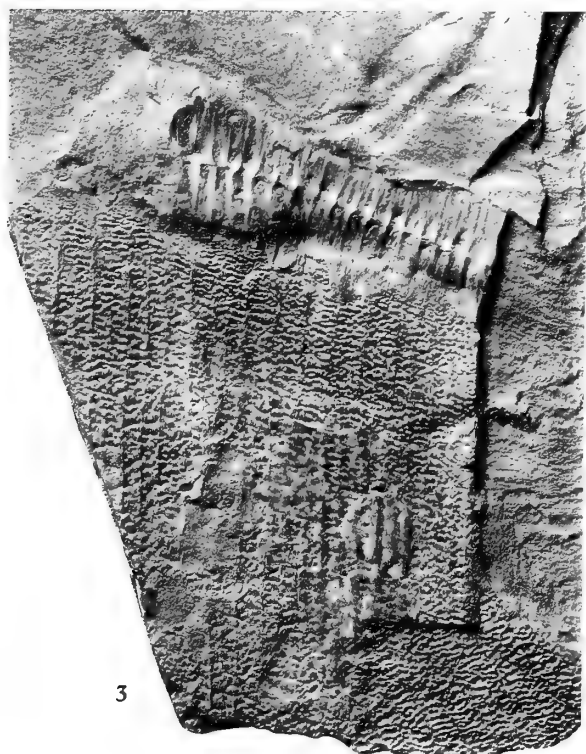




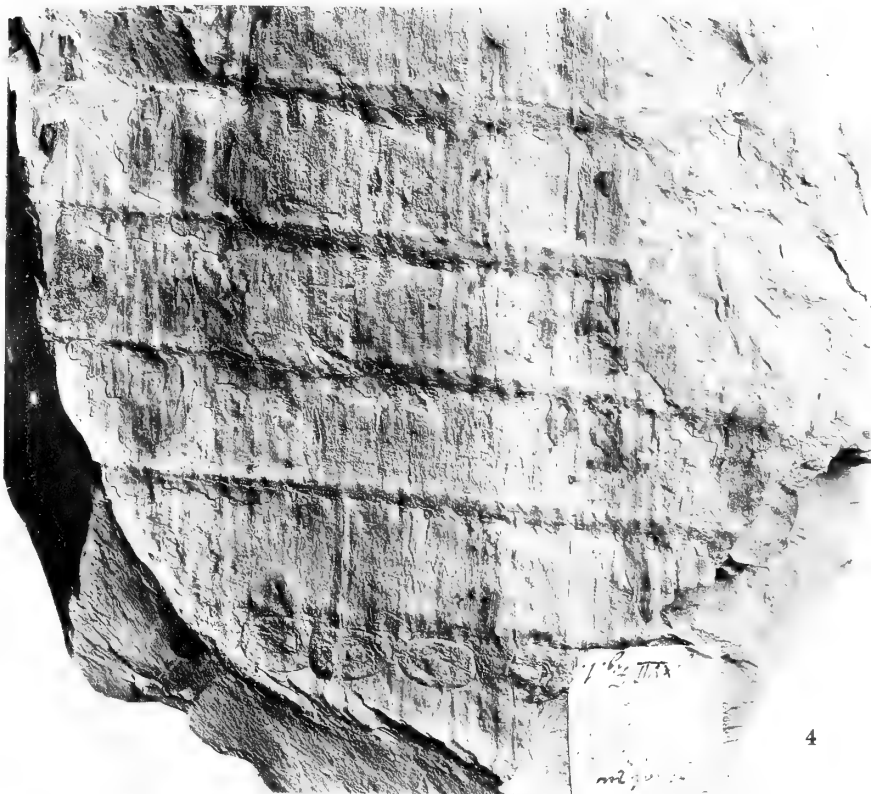
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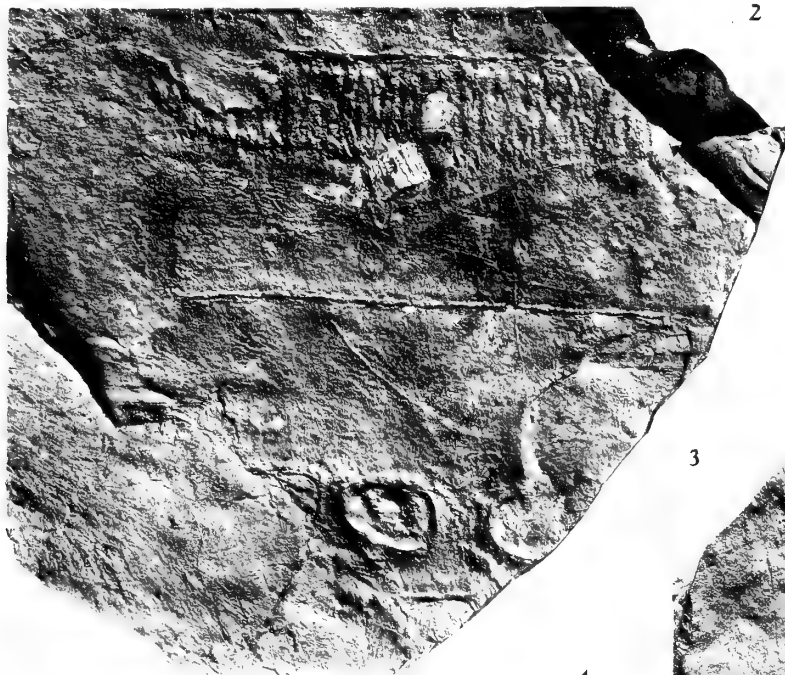
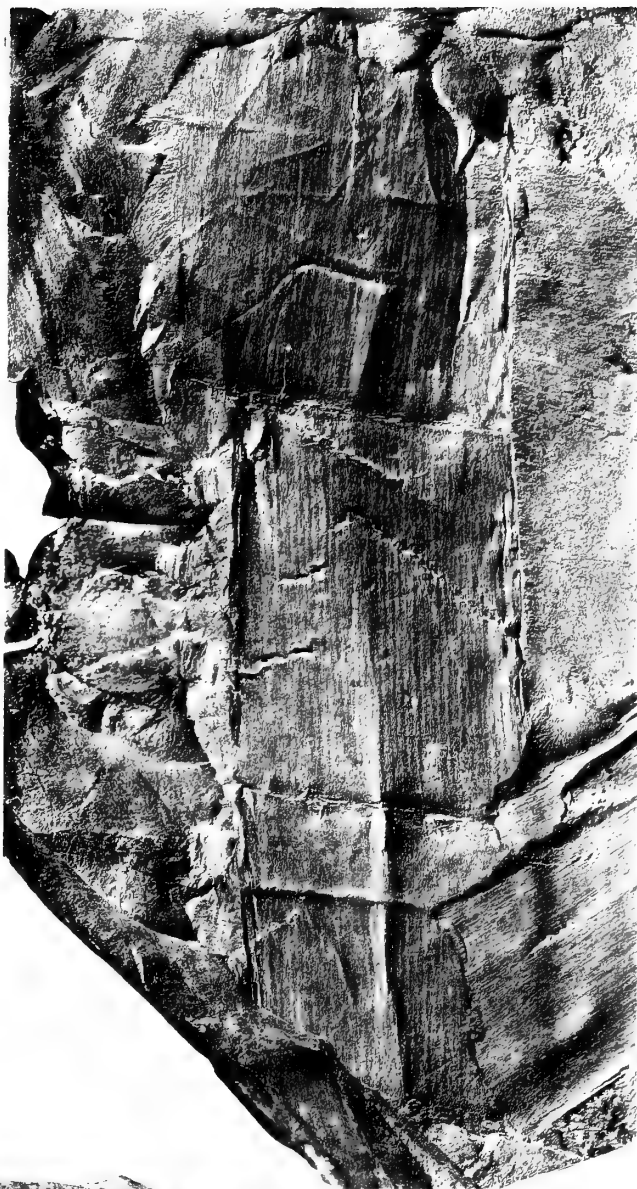
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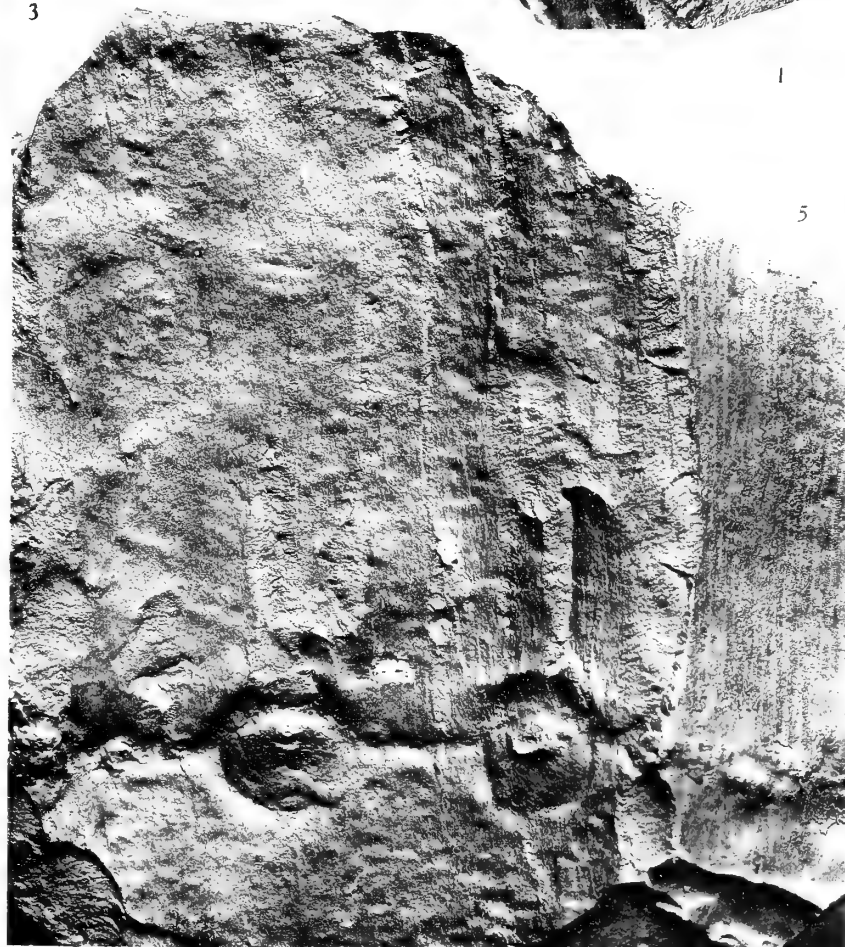




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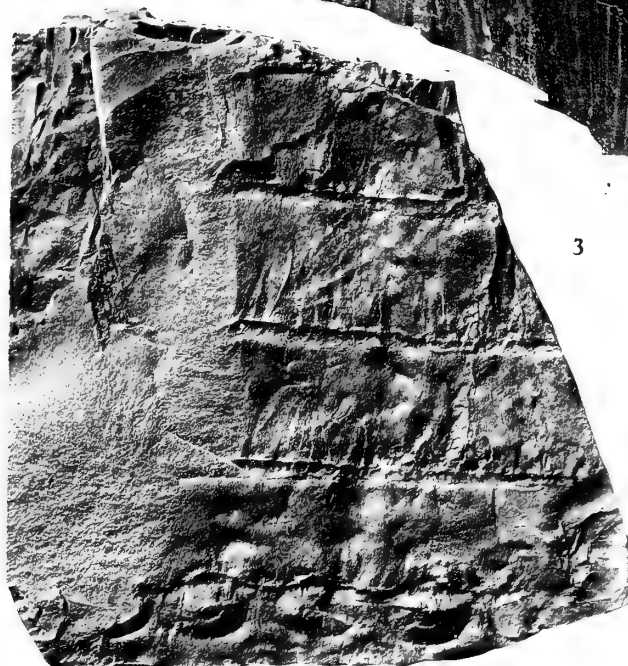
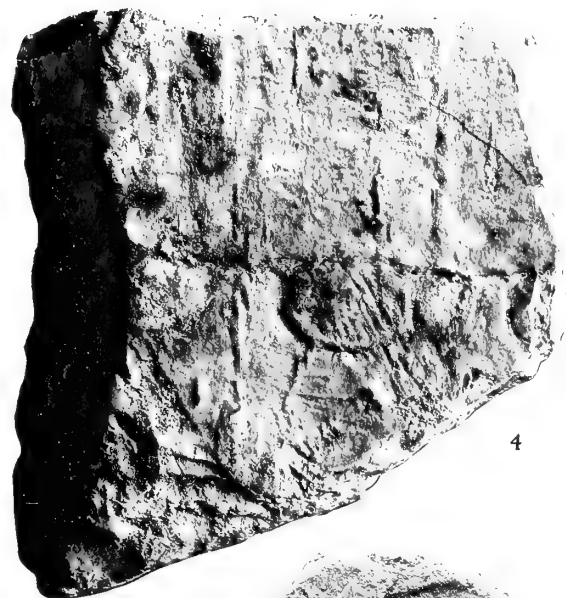
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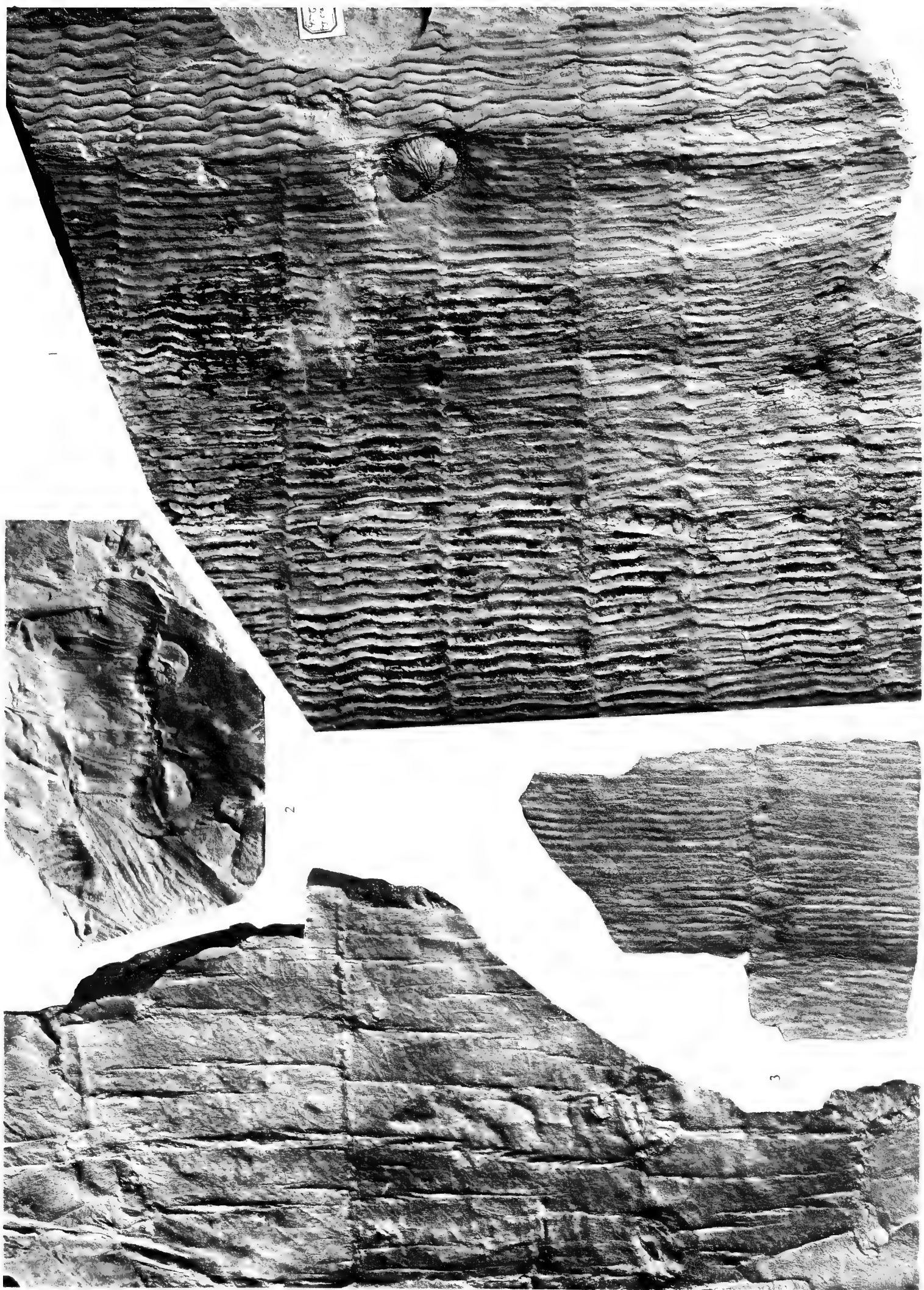




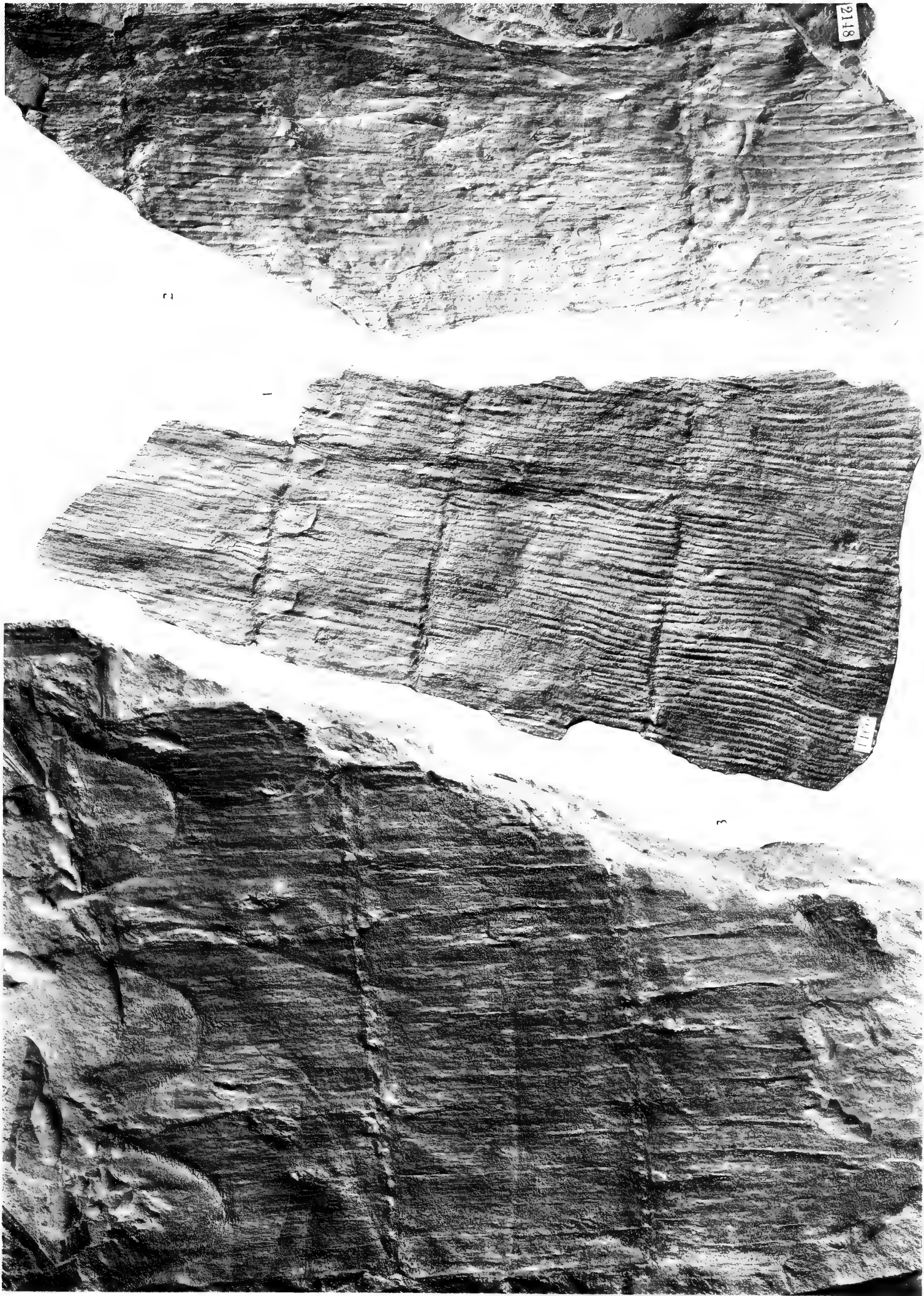






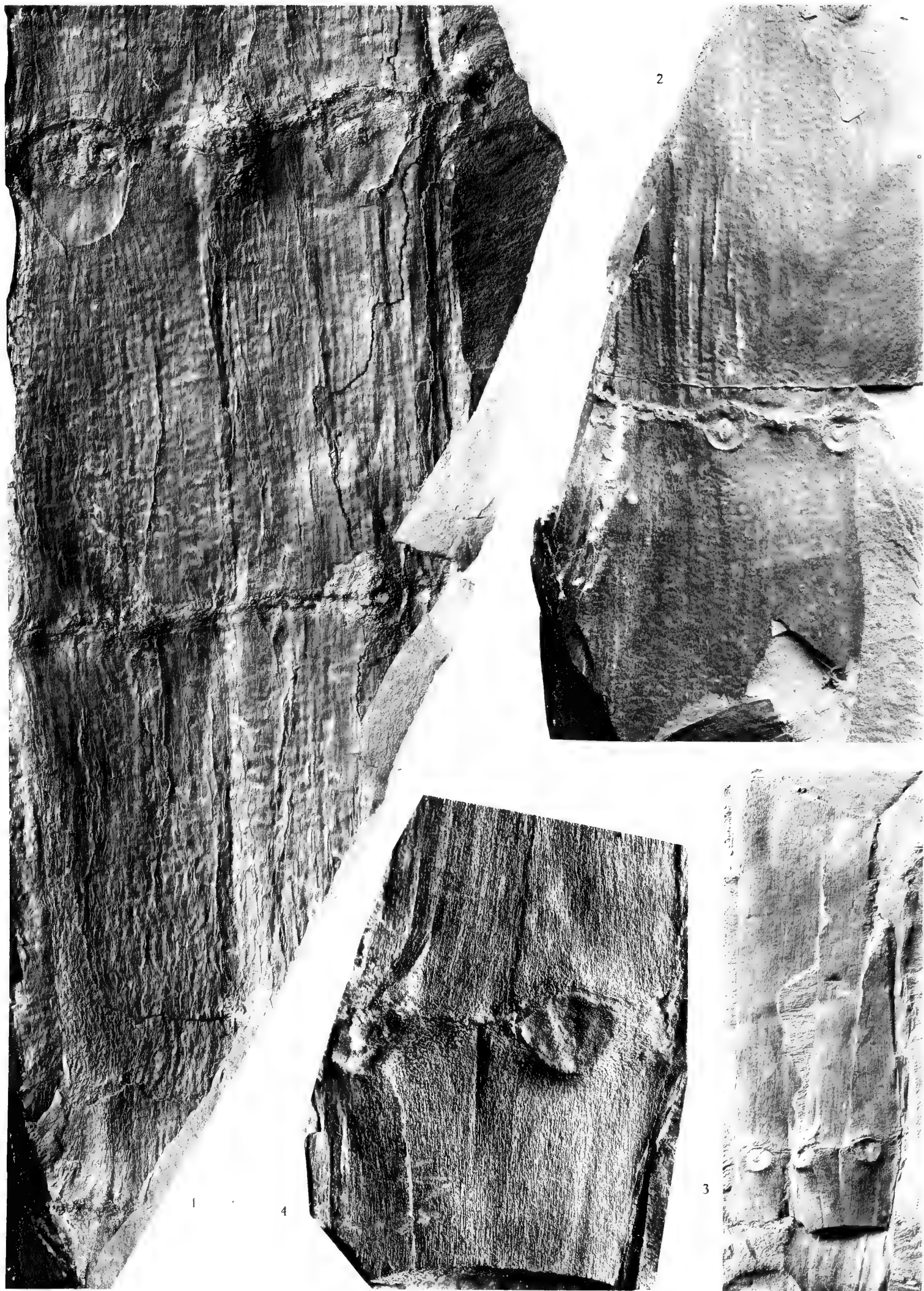










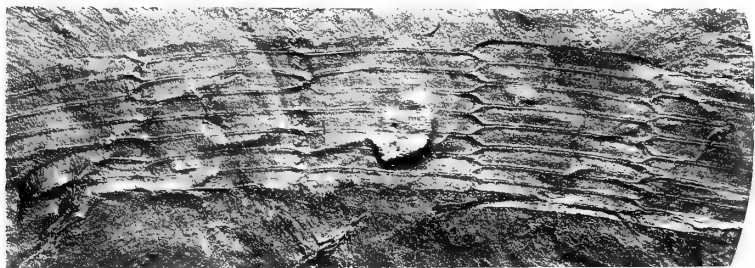




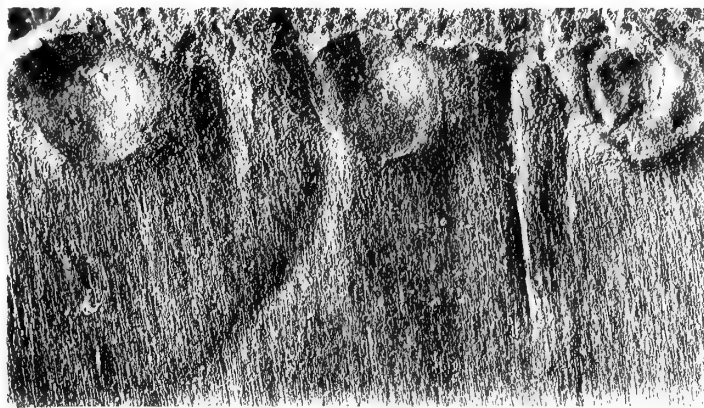




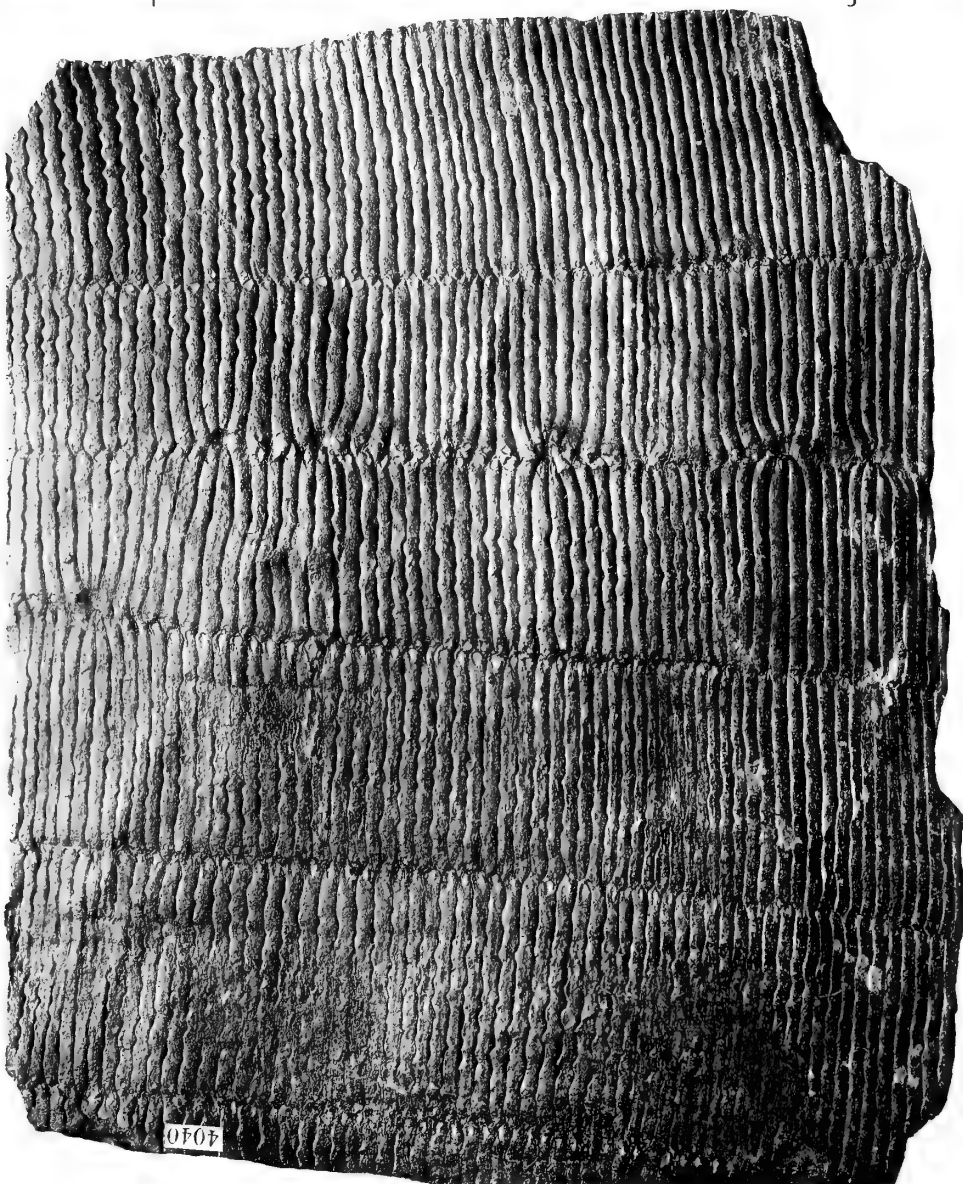
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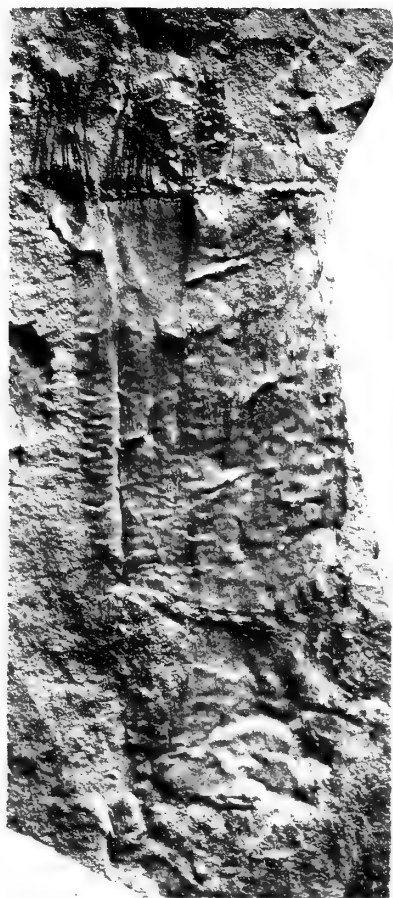
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6



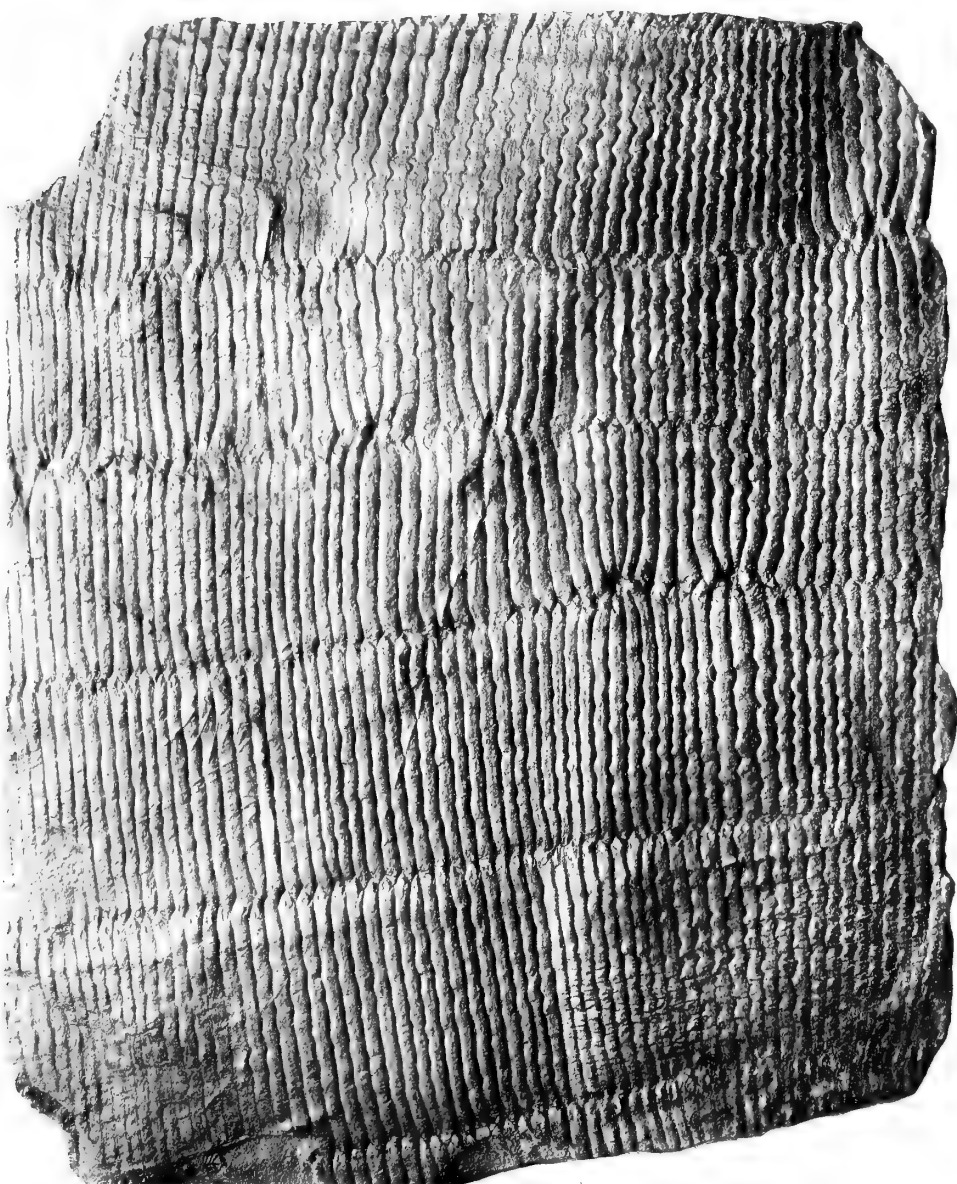




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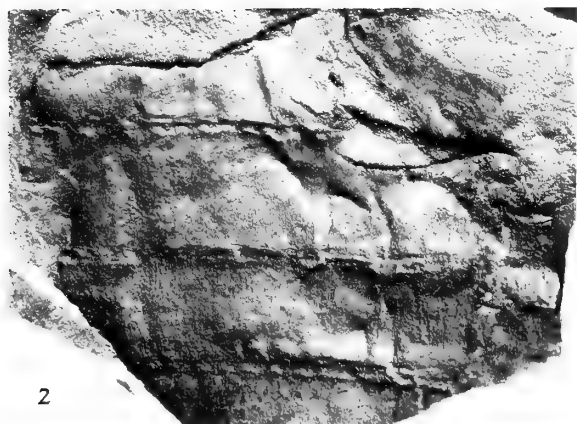




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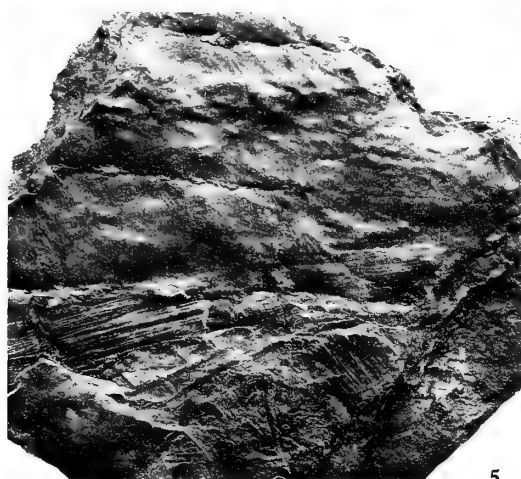
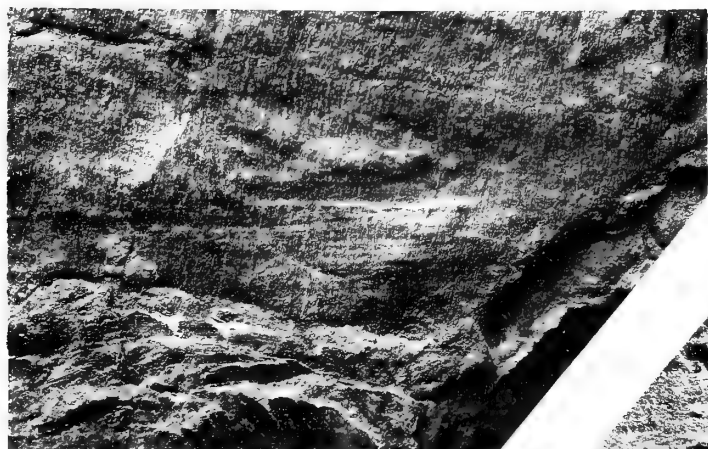
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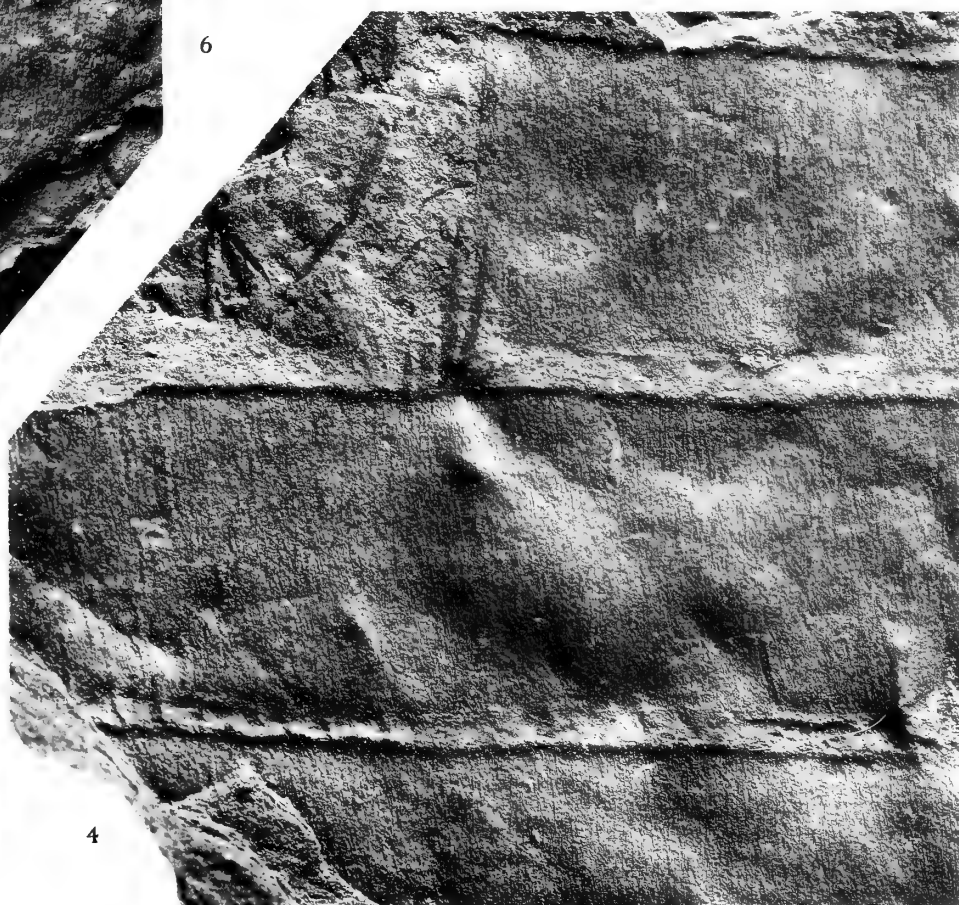
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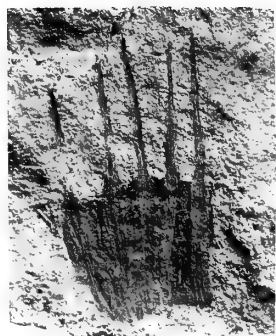
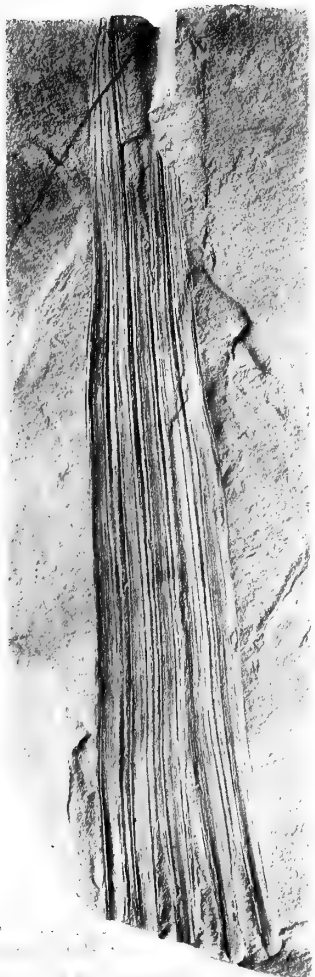


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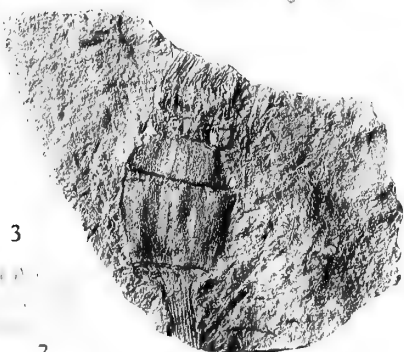


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3

*C. apina*

2



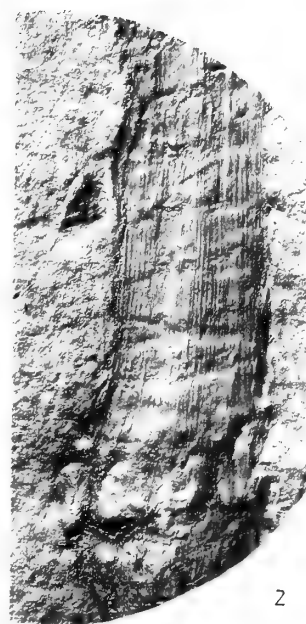
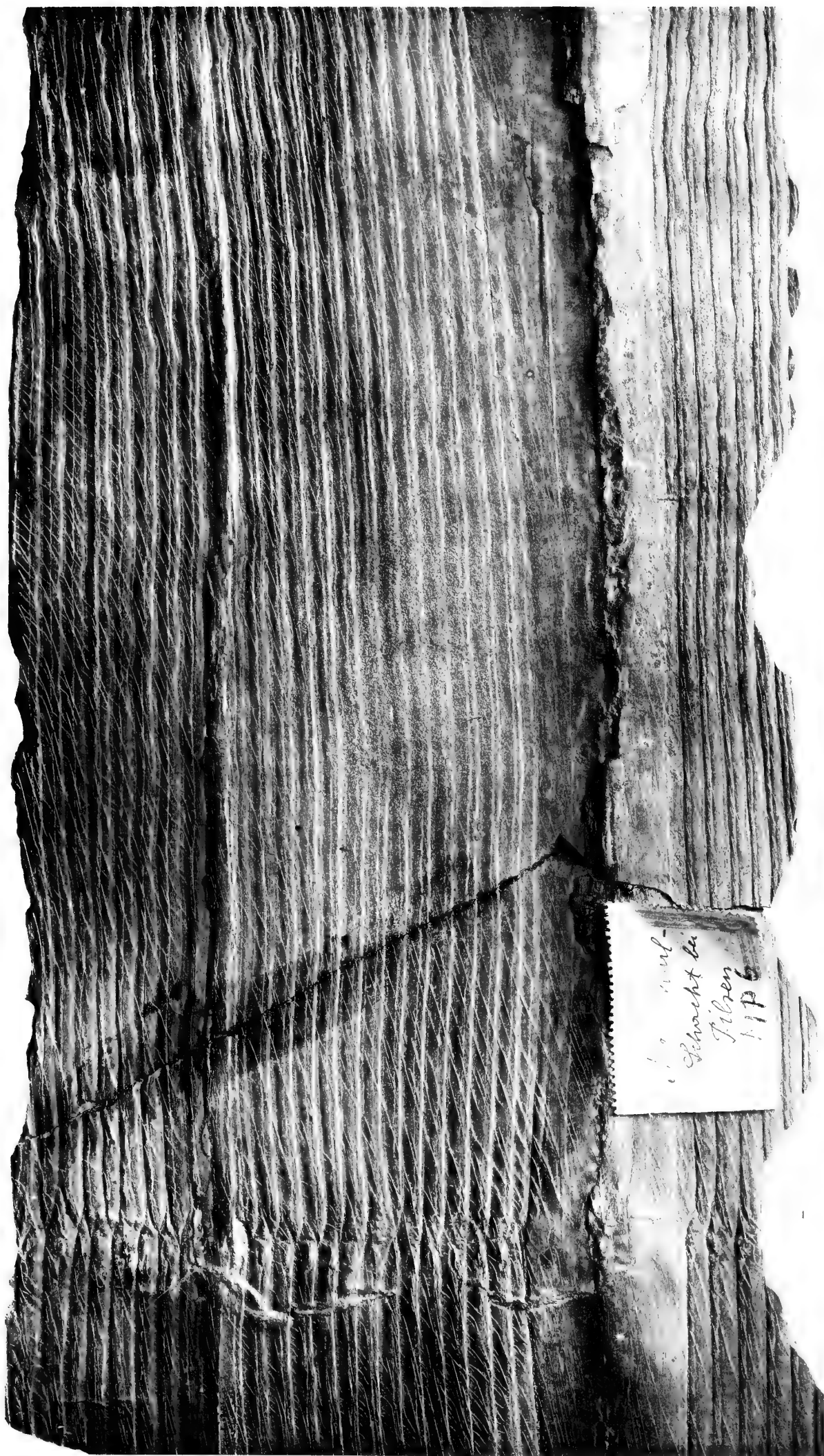
4

*C. apina*  
(H. 10)

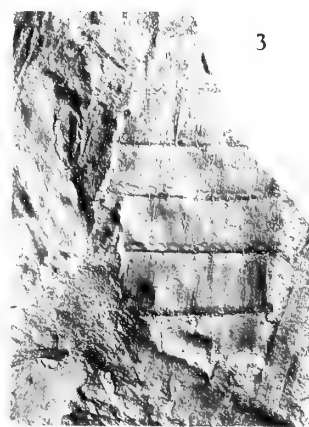


5





2



3

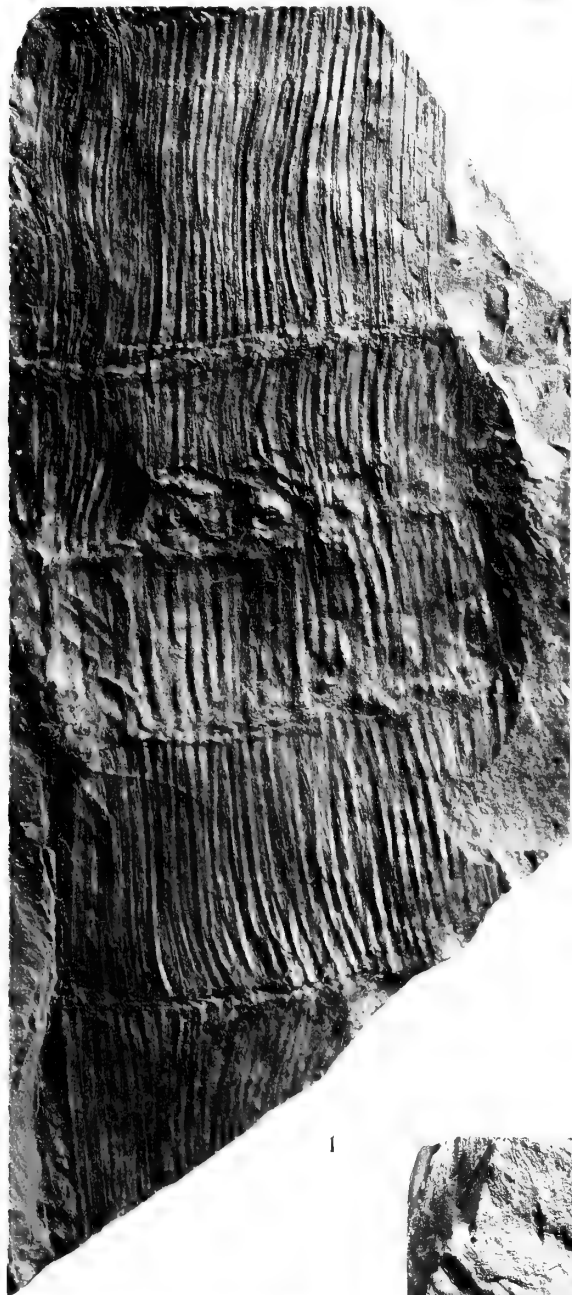


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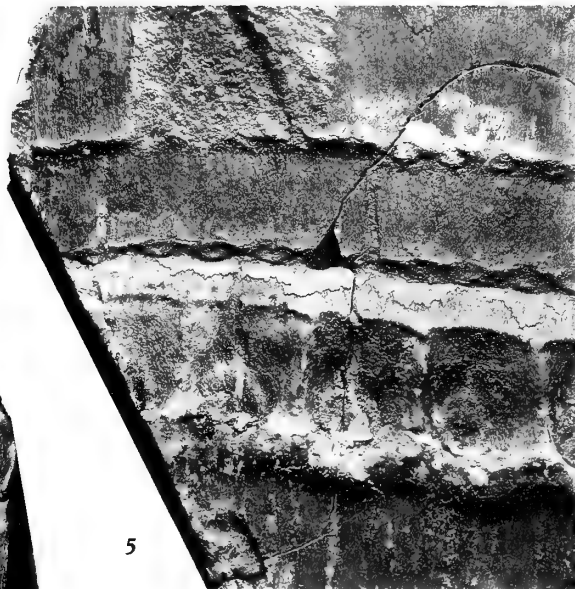
*C. spinosa* (*C. verticillata*)



1



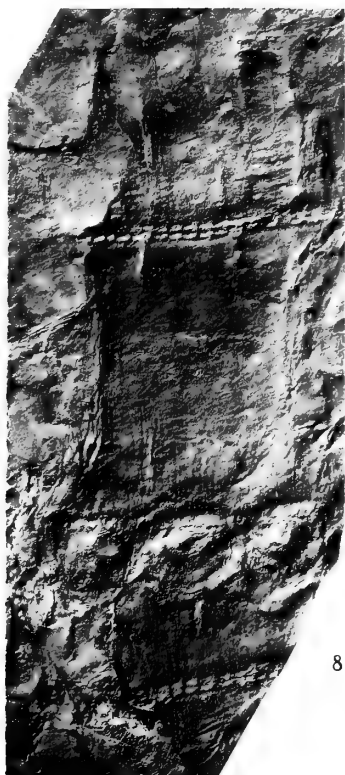
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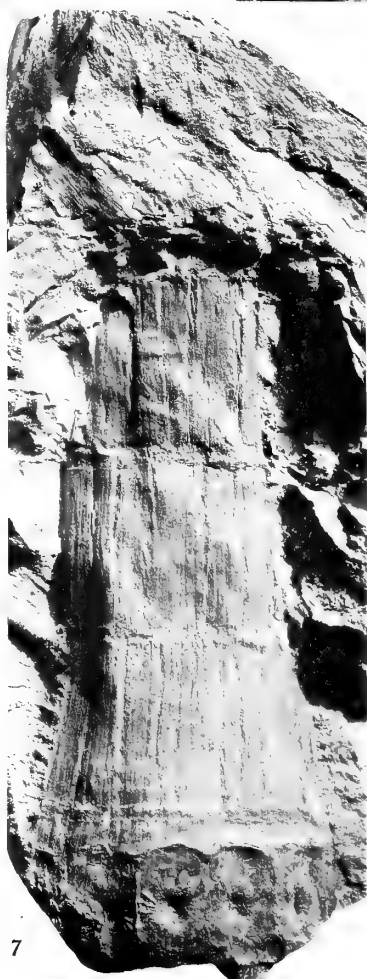
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4



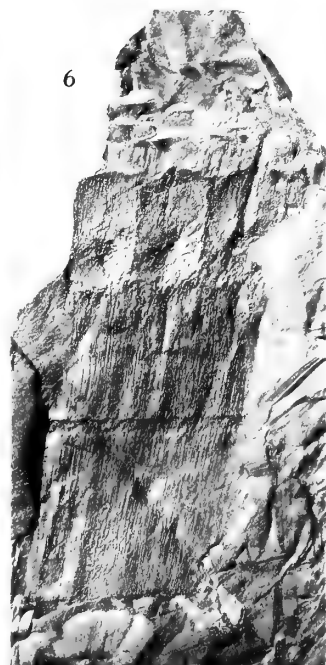
8



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2



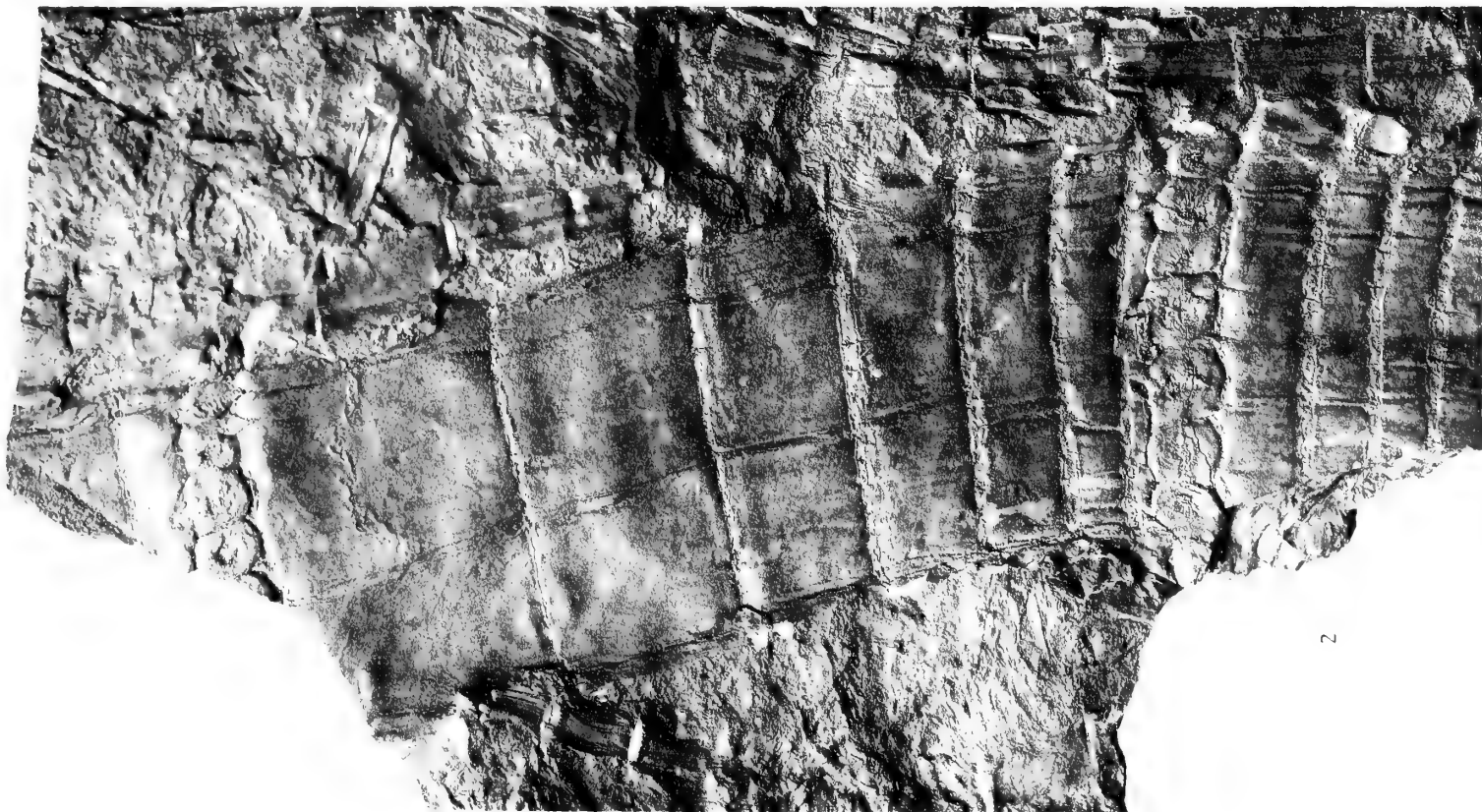
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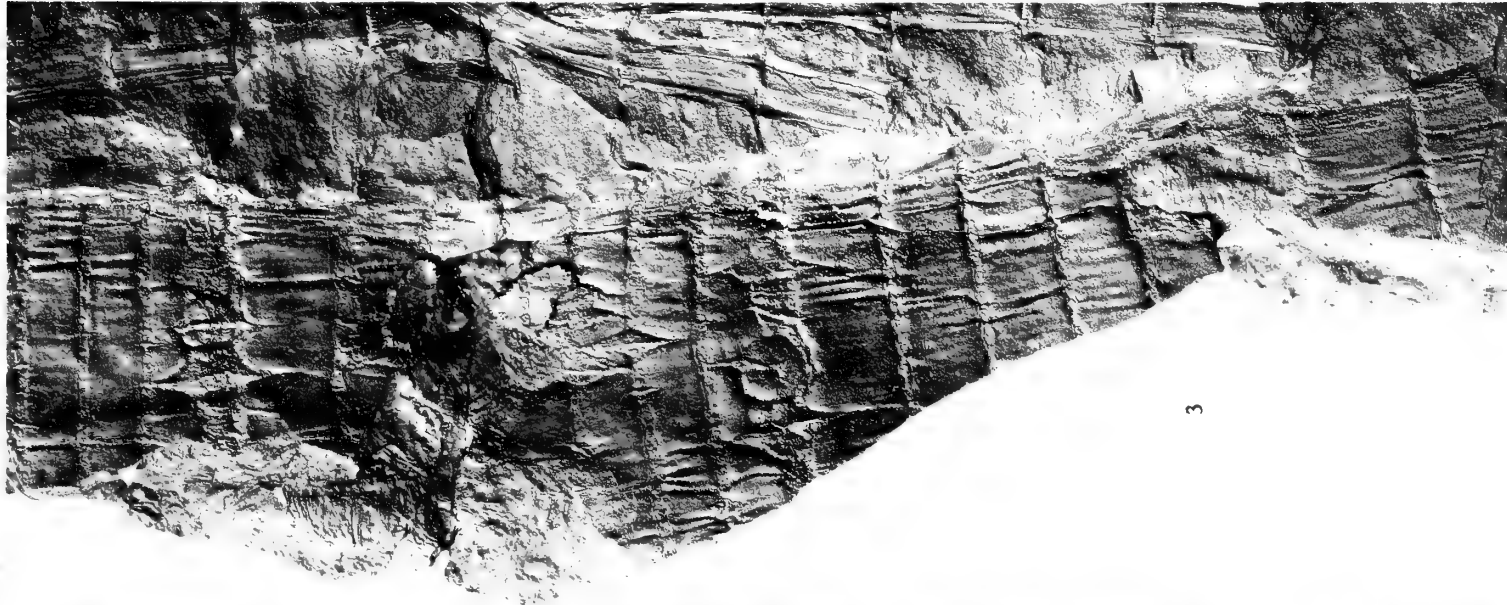




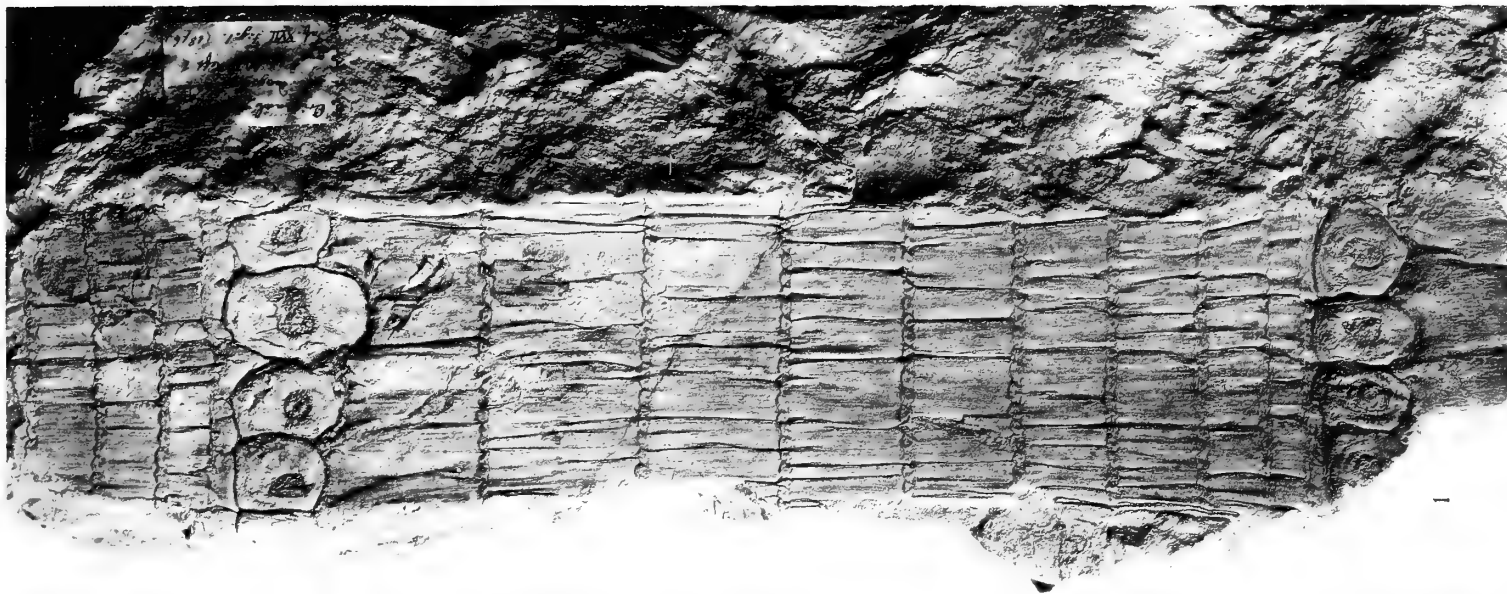




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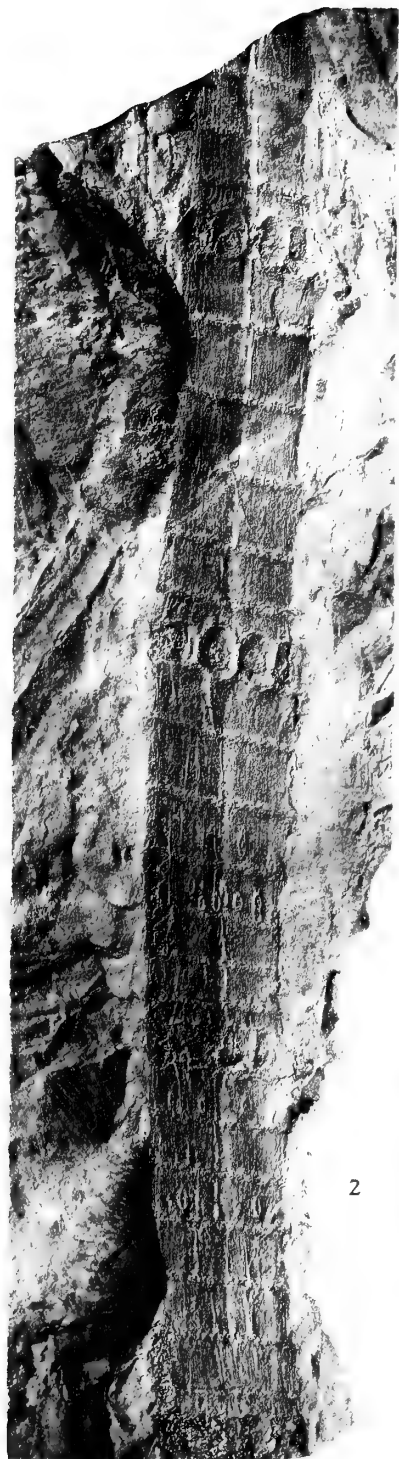


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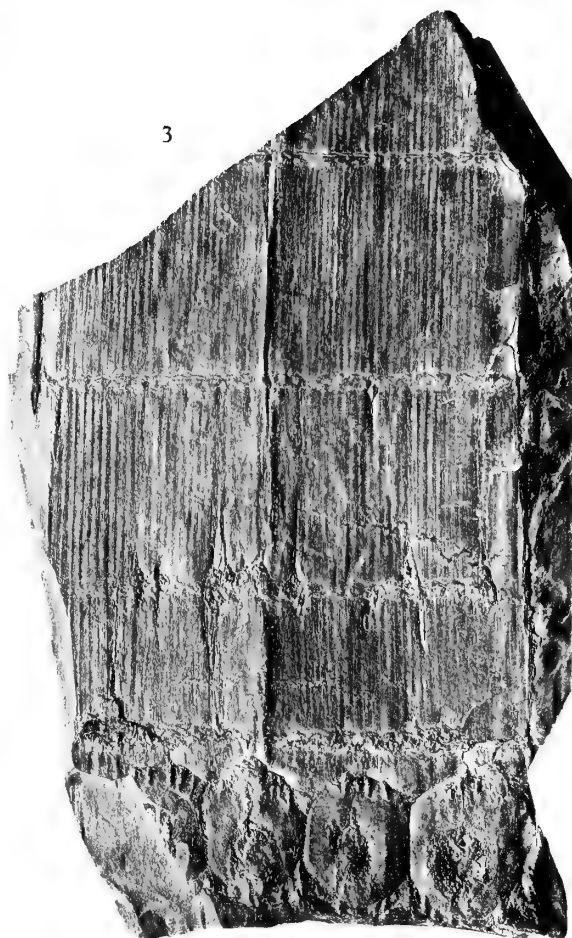


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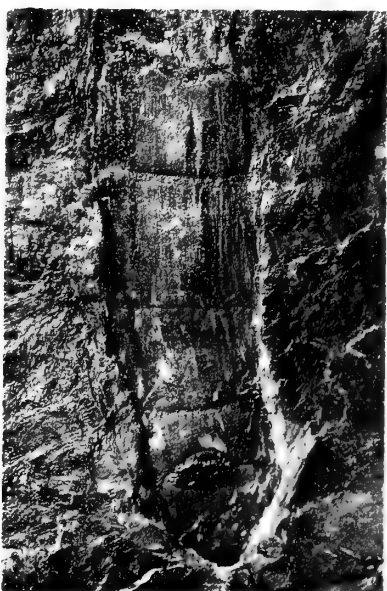




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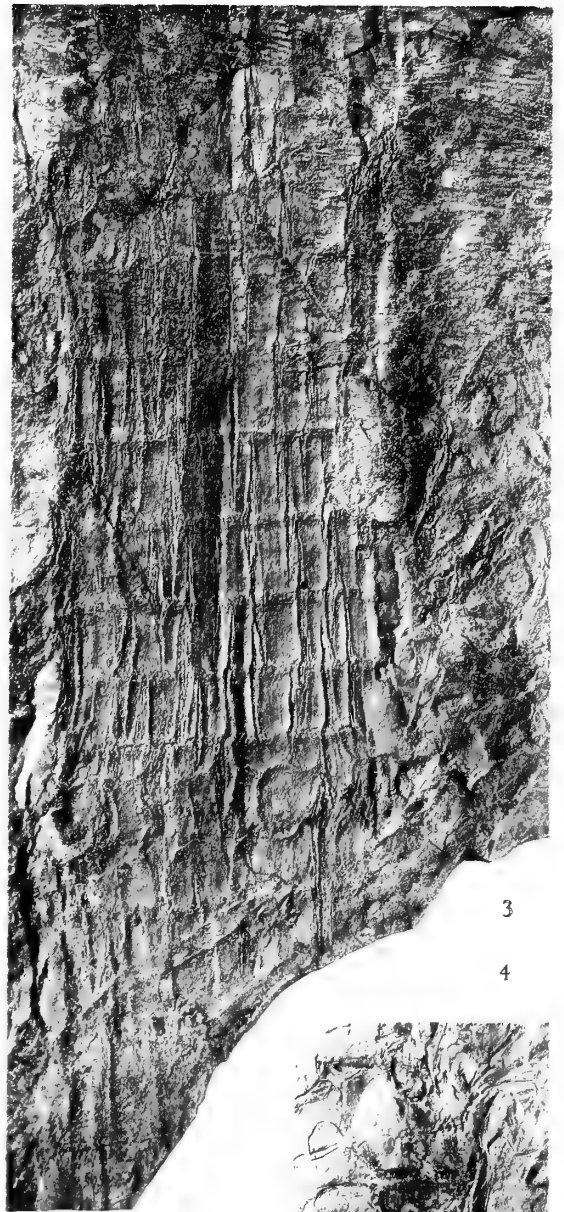
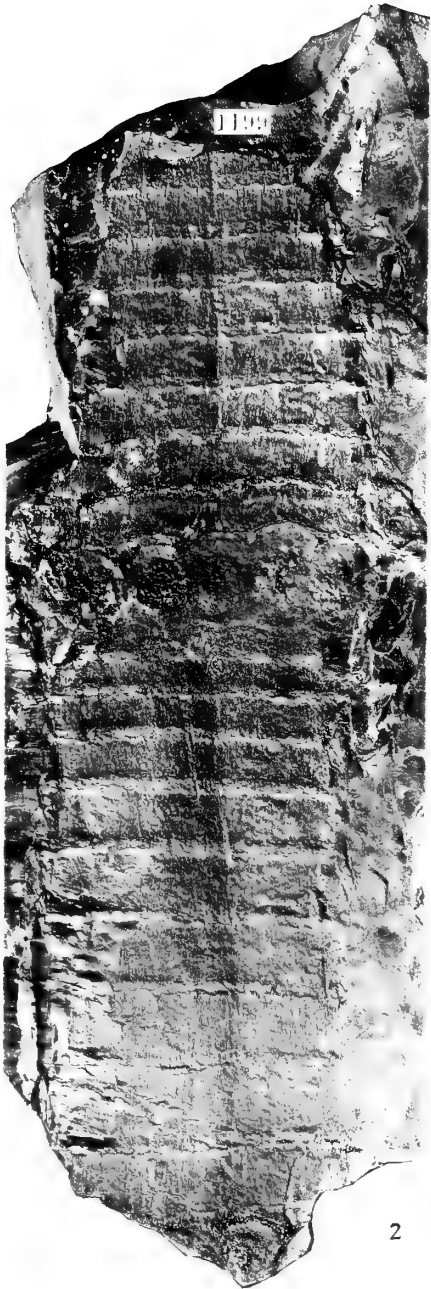
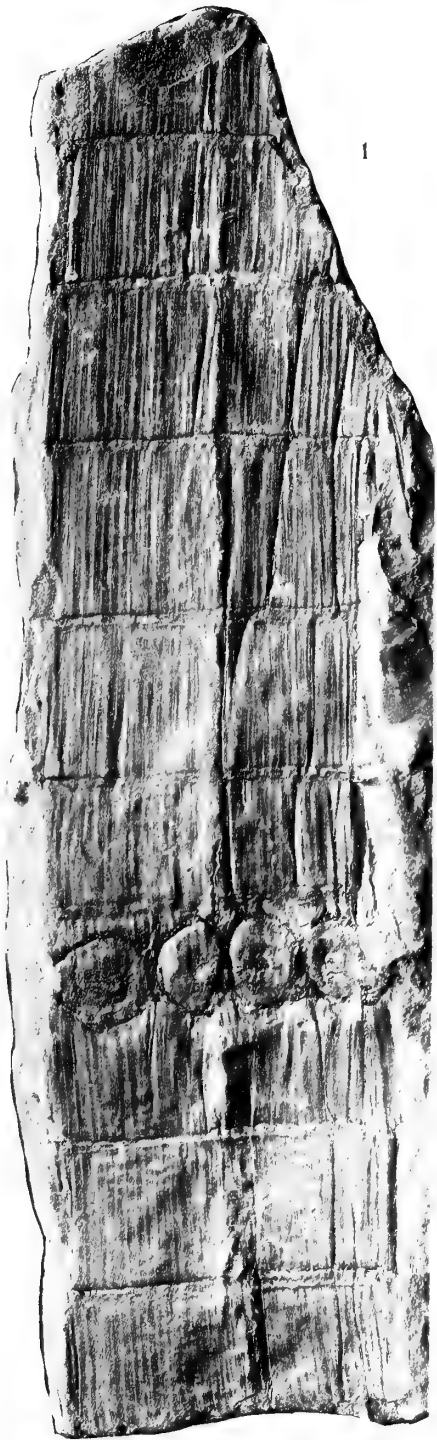
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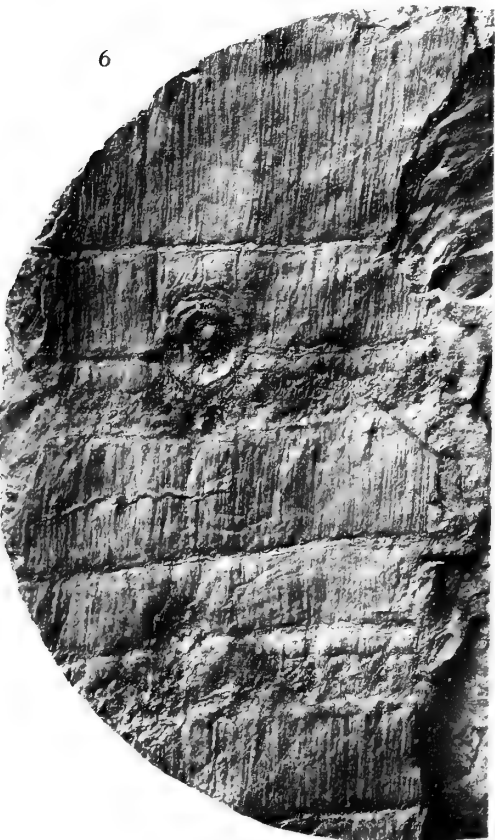
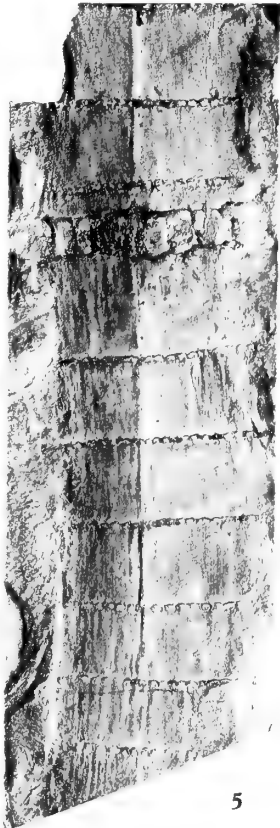
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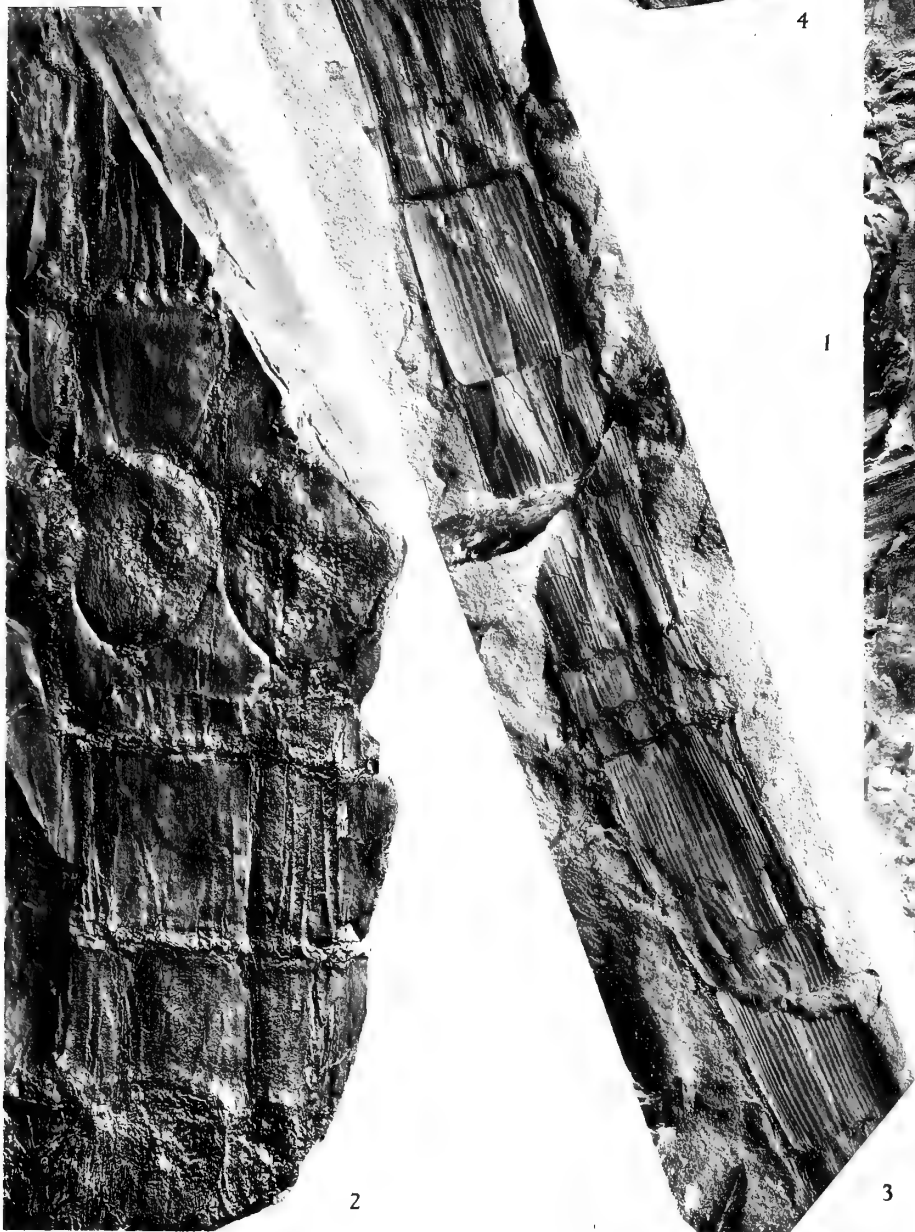




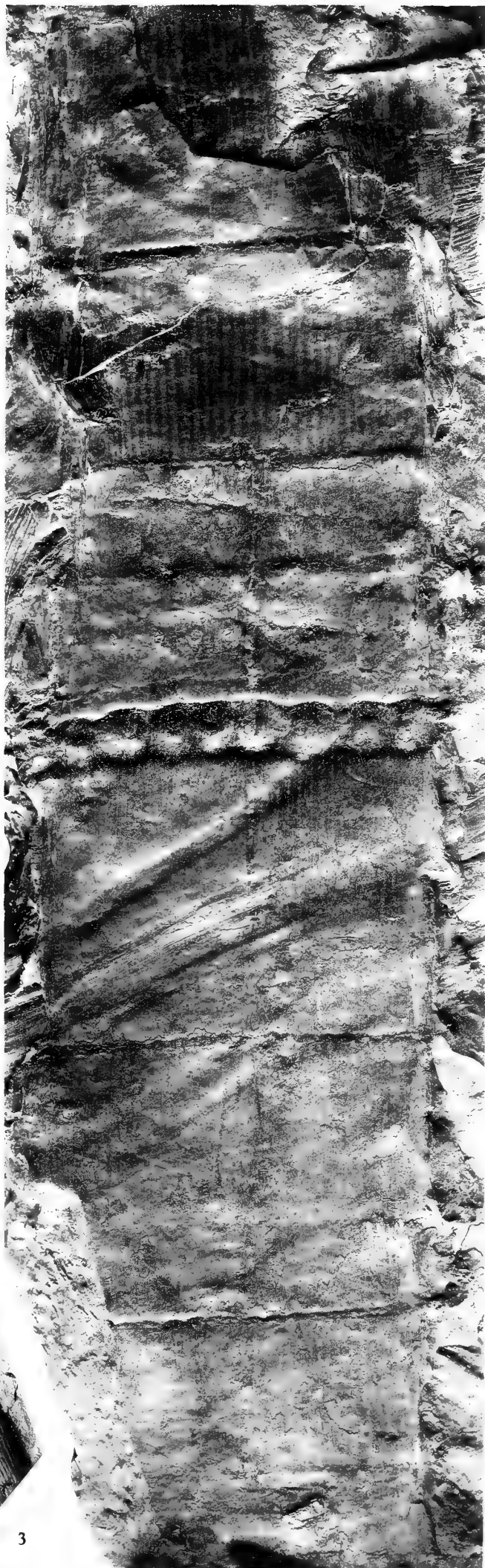




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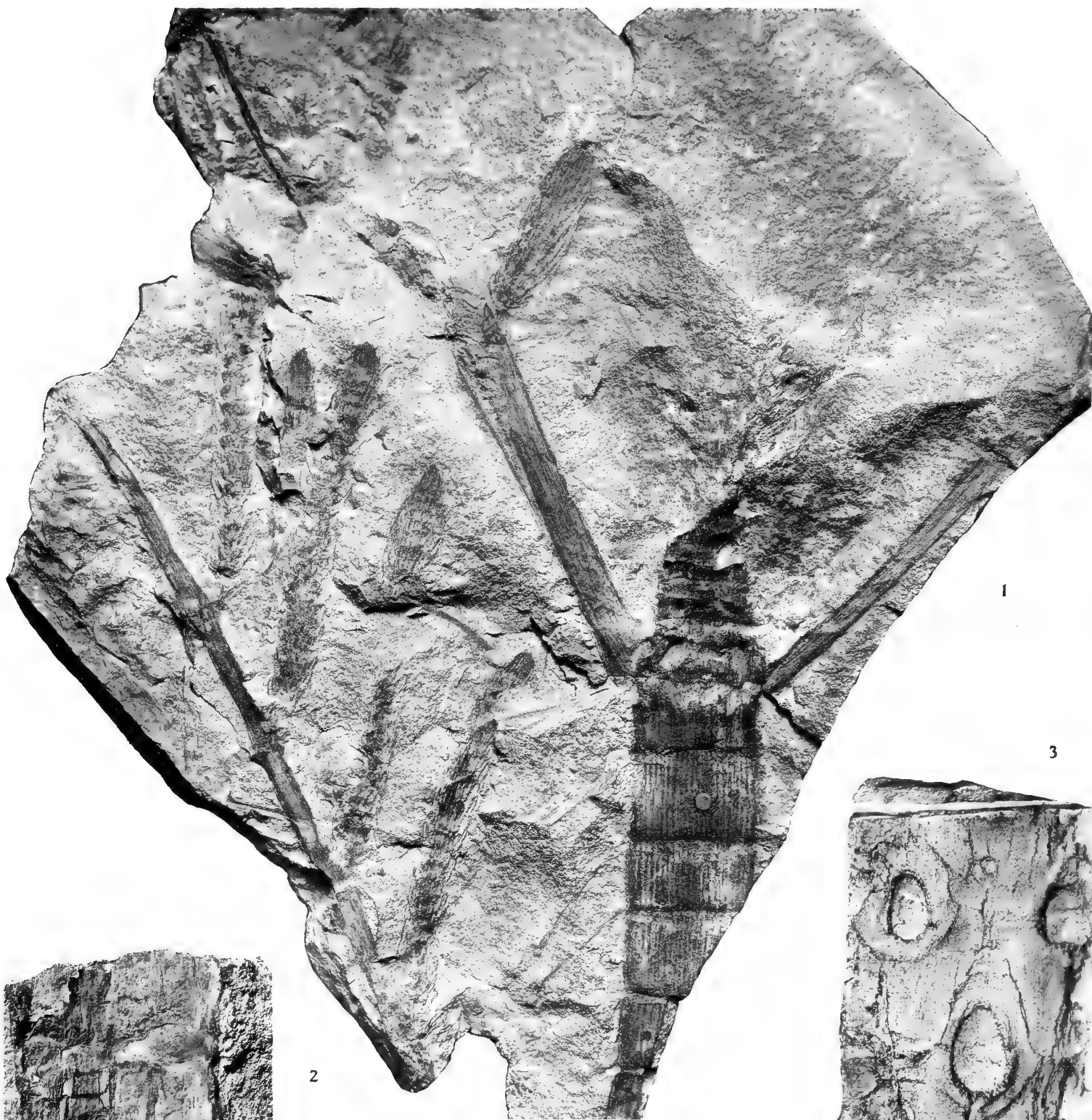
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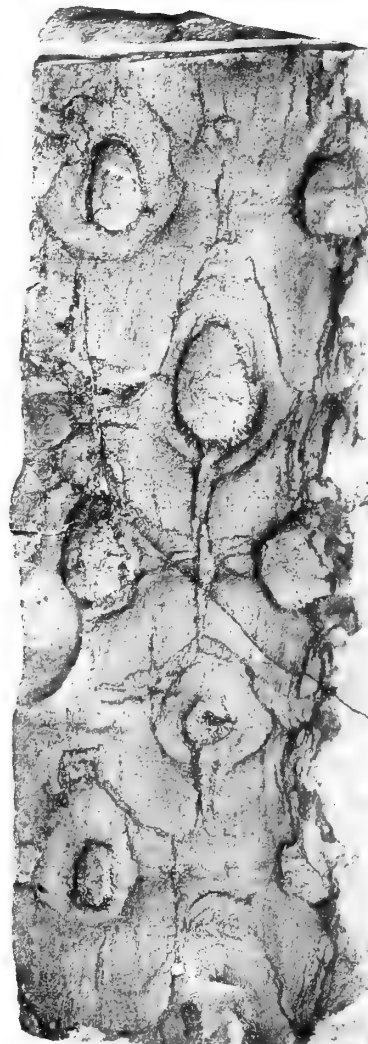
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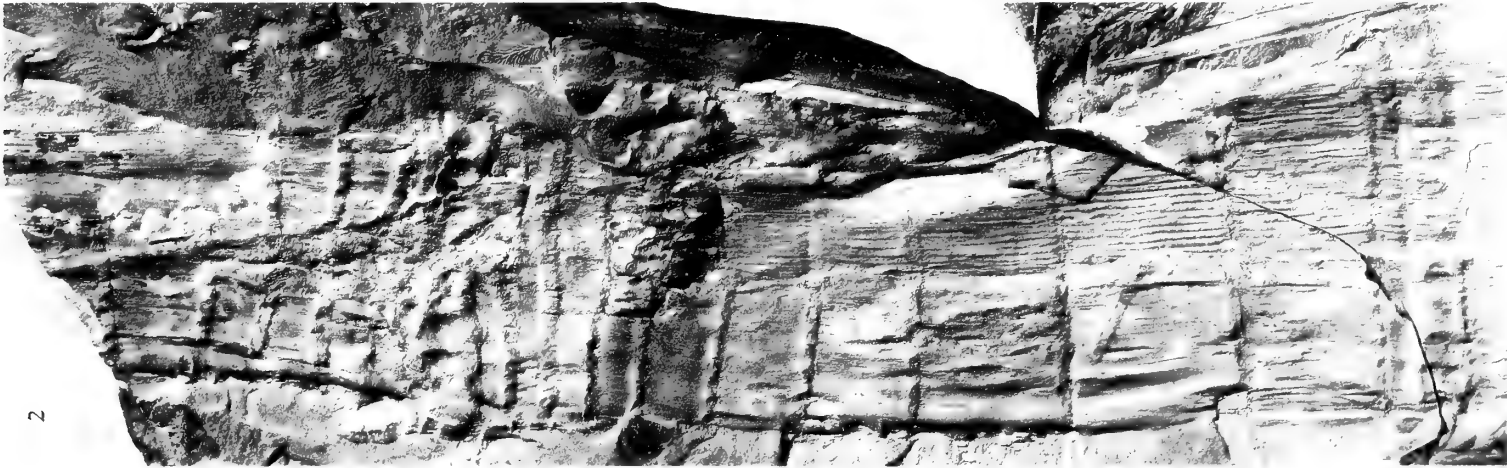


*C. thomsonii*  
Fichtelberg

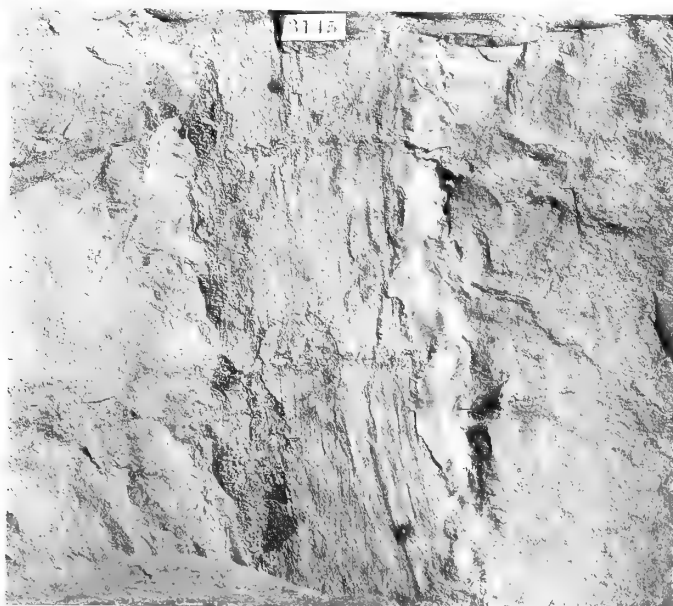
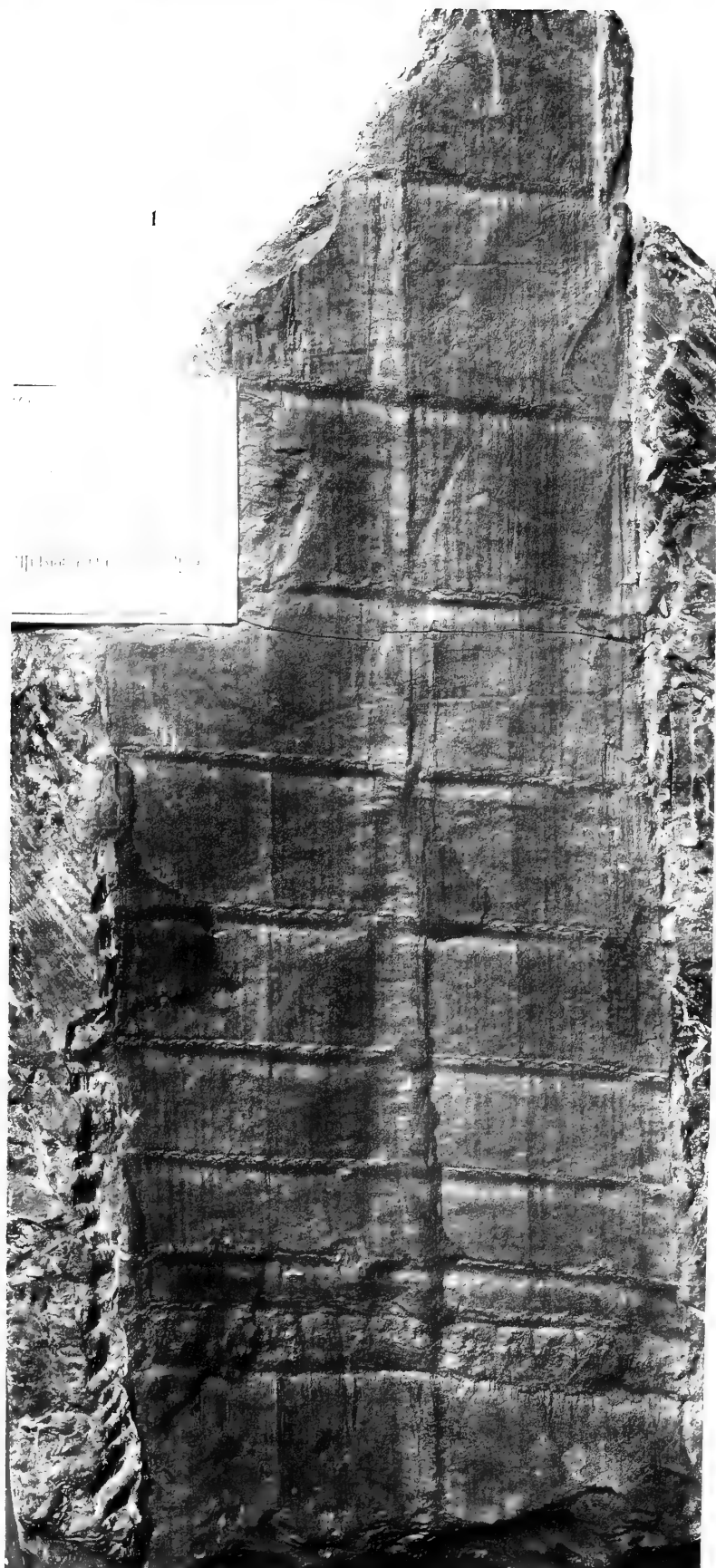
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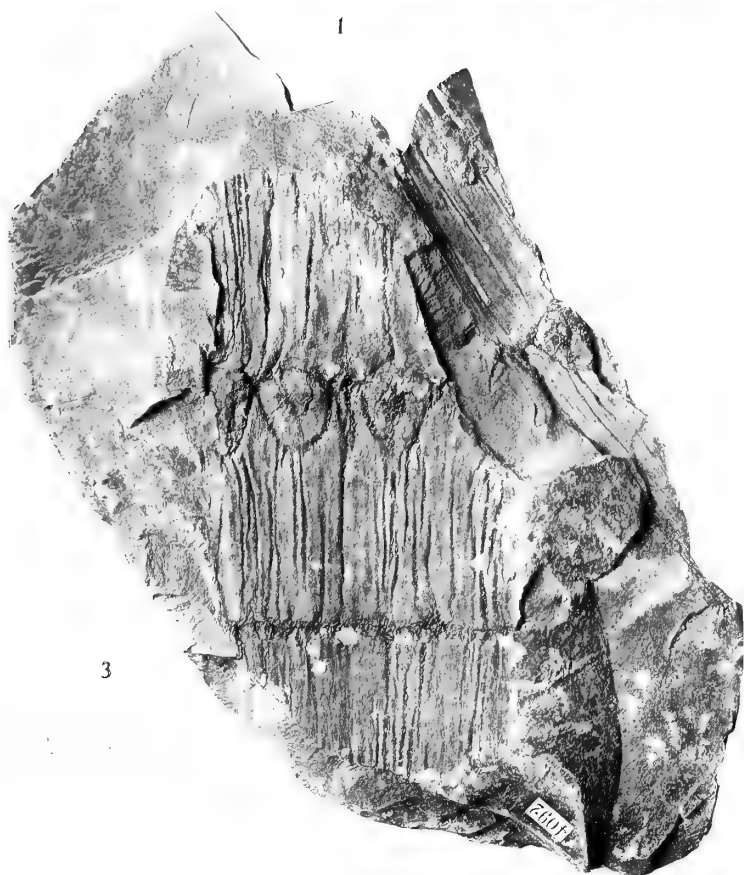








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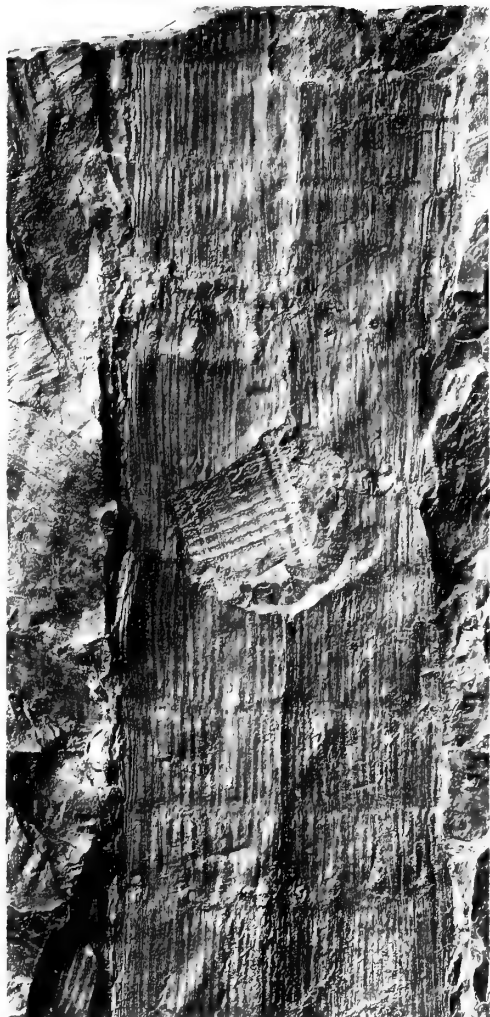




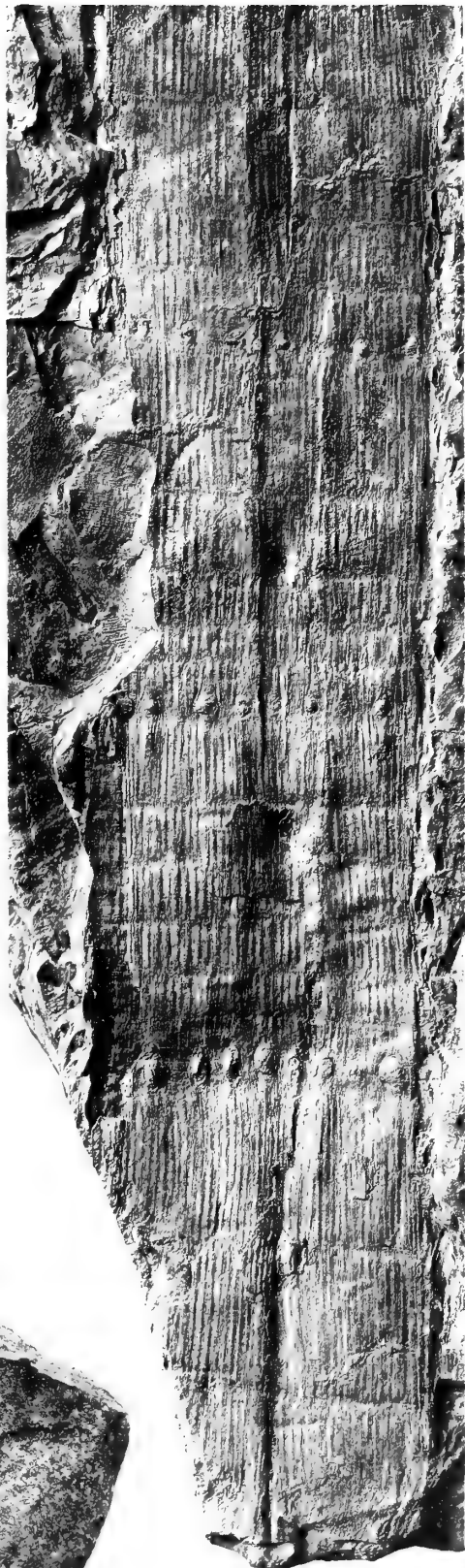
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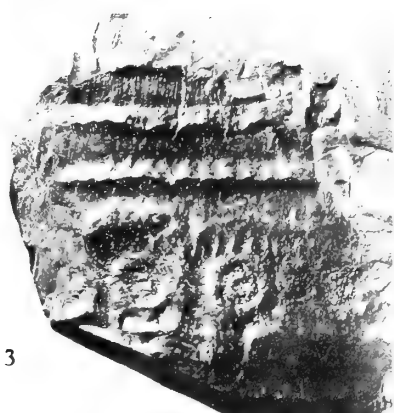
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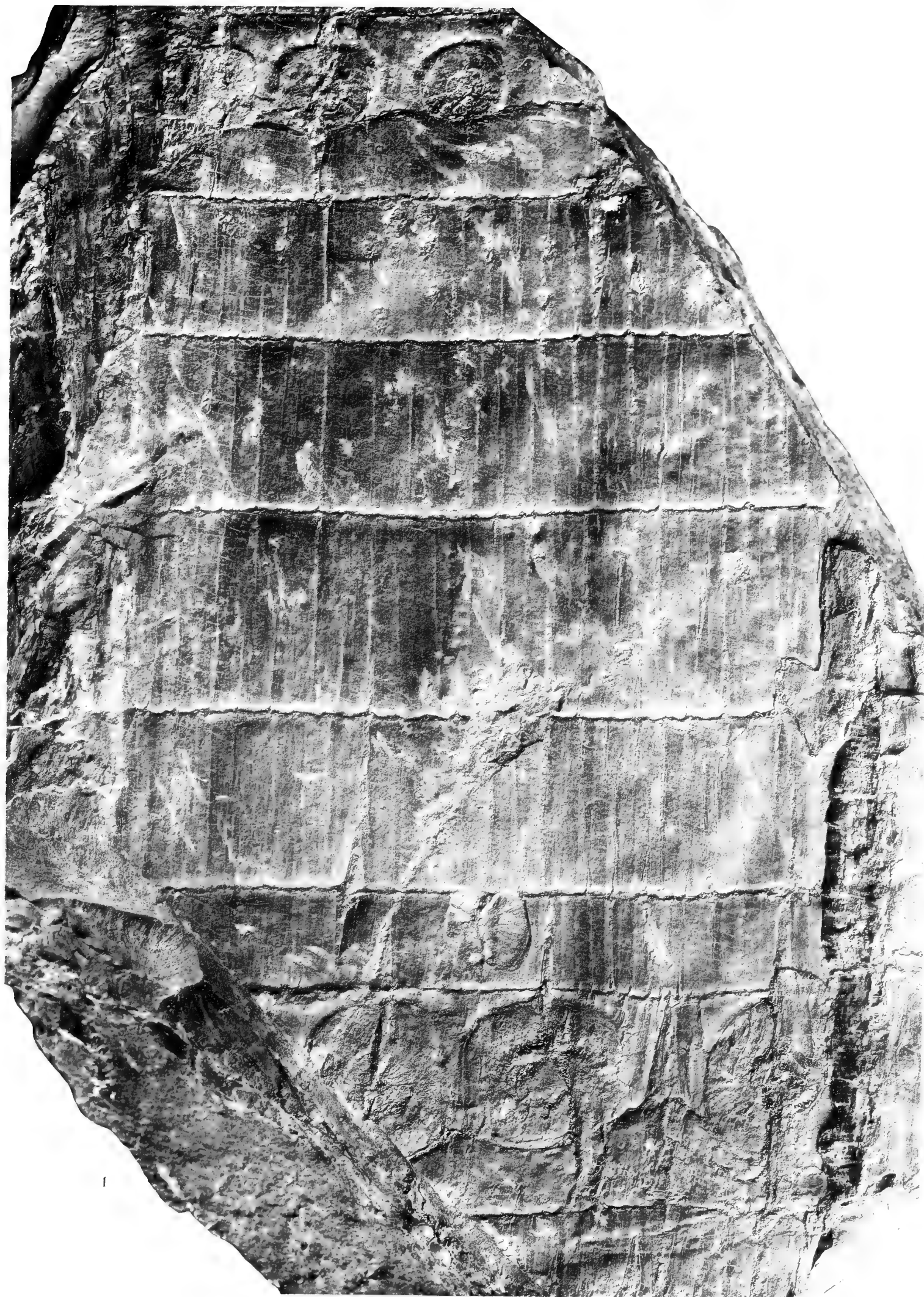
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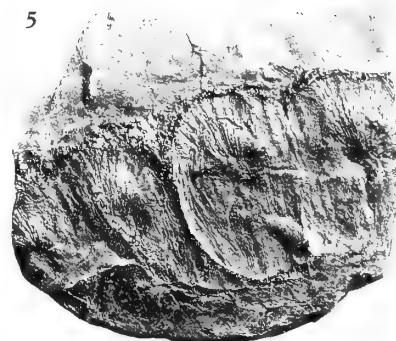
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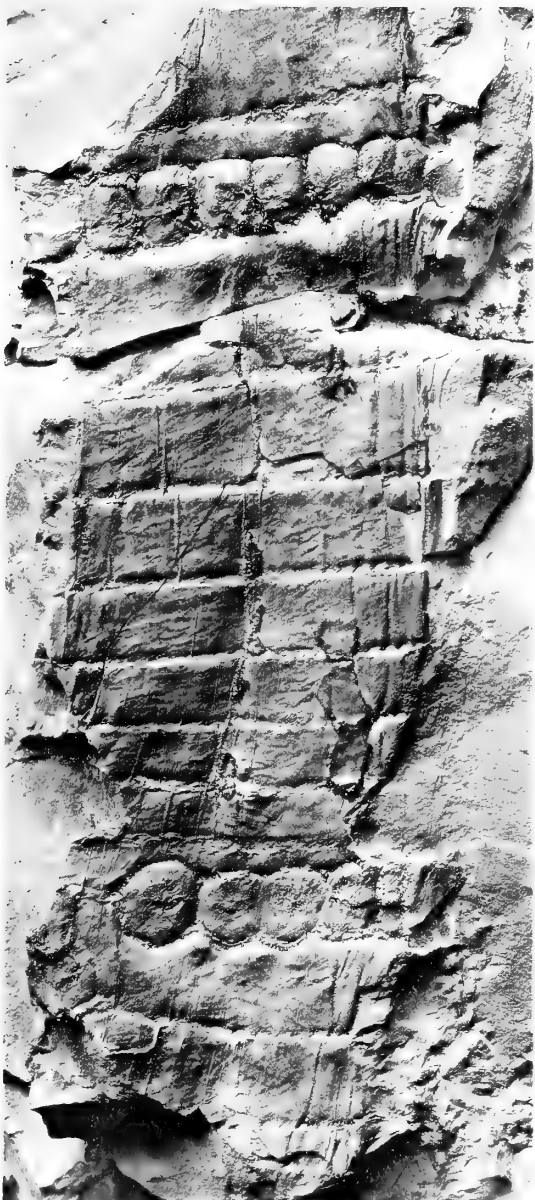


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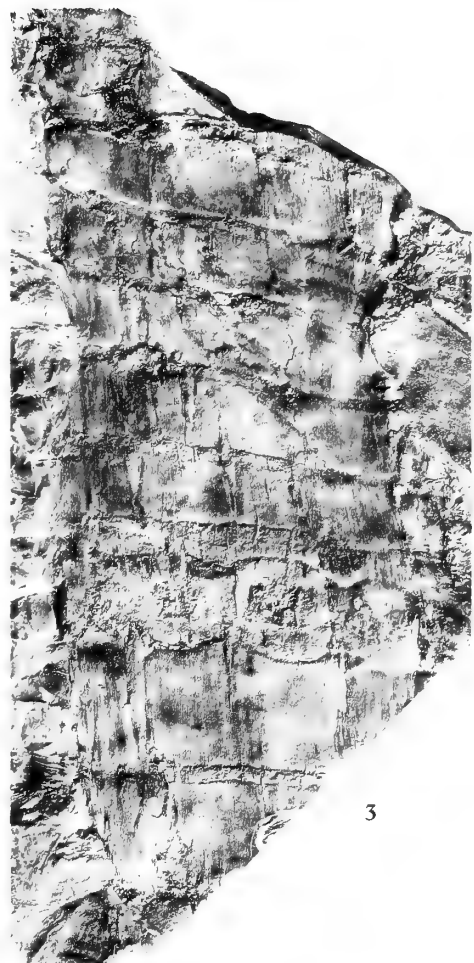
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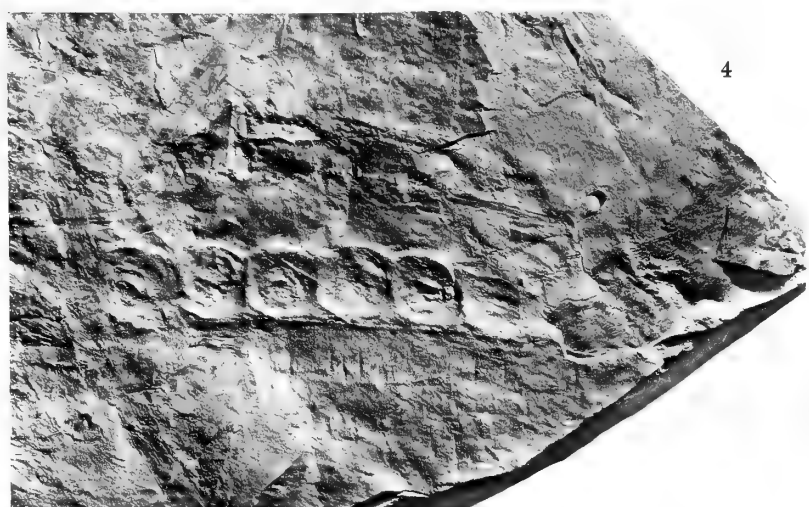
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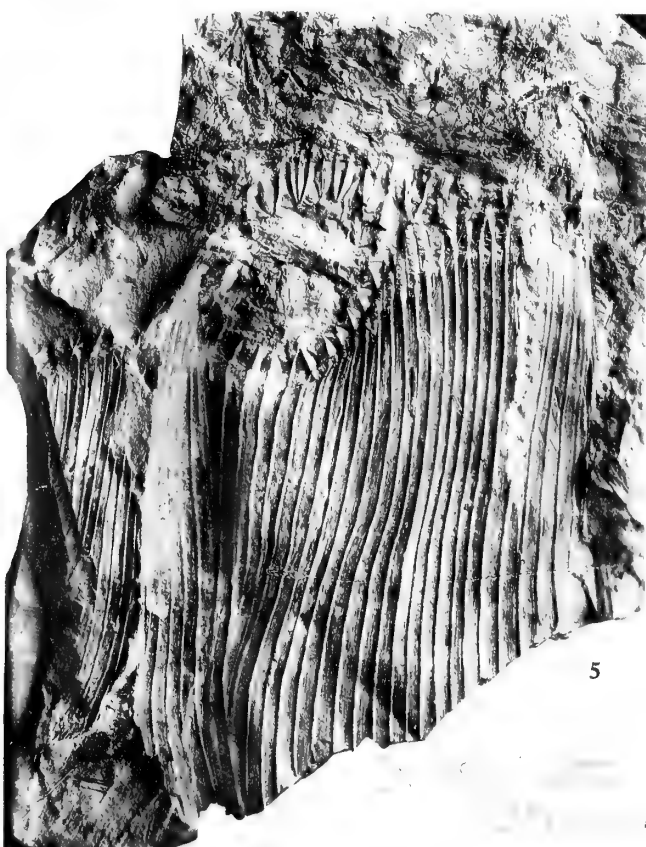
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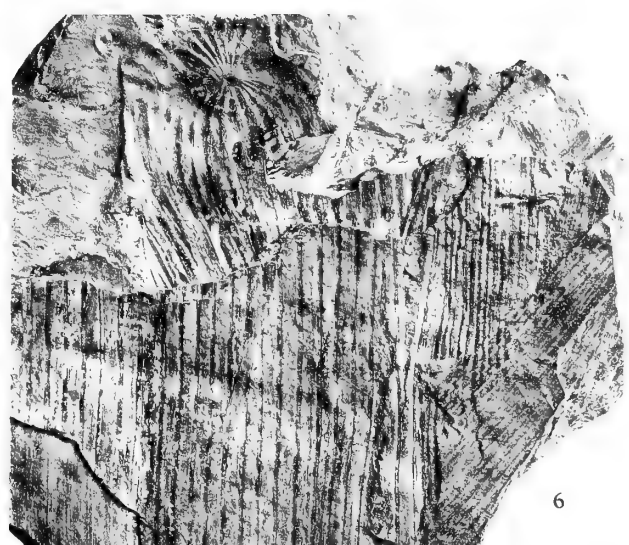
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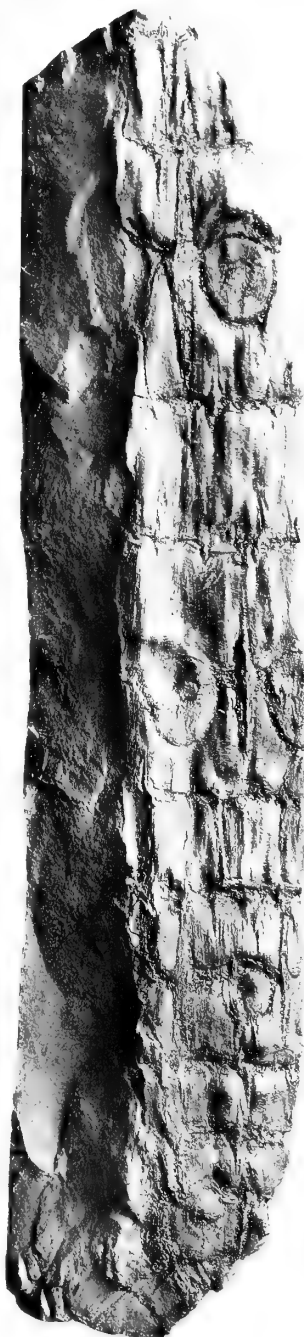
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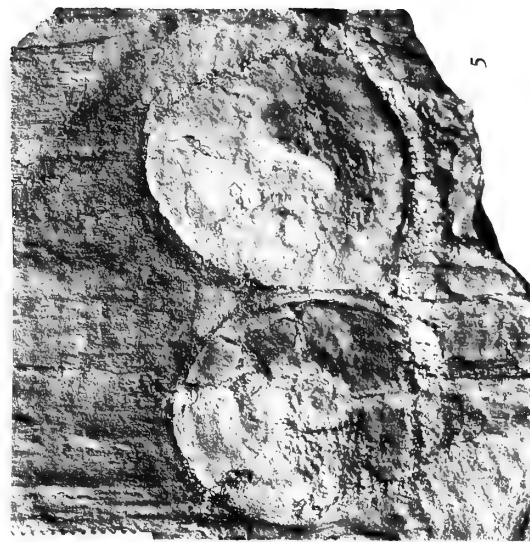
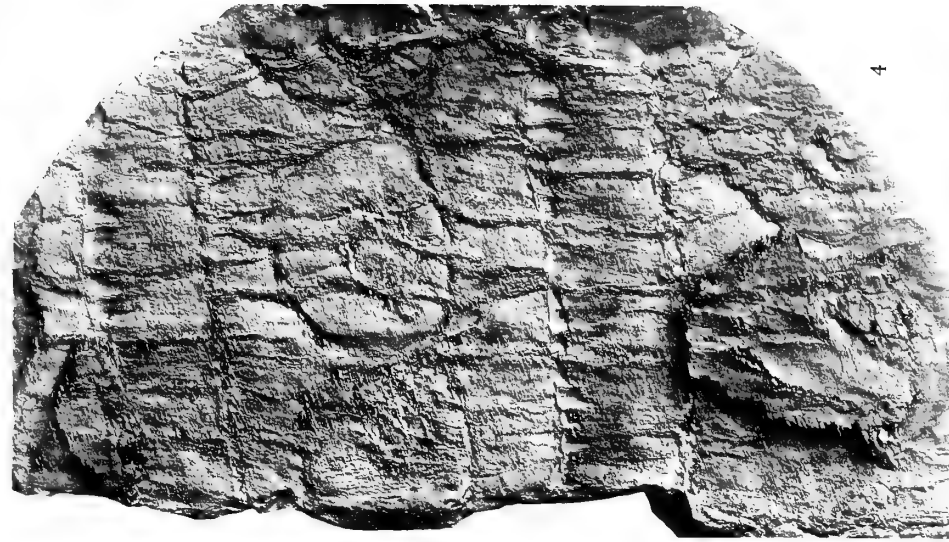
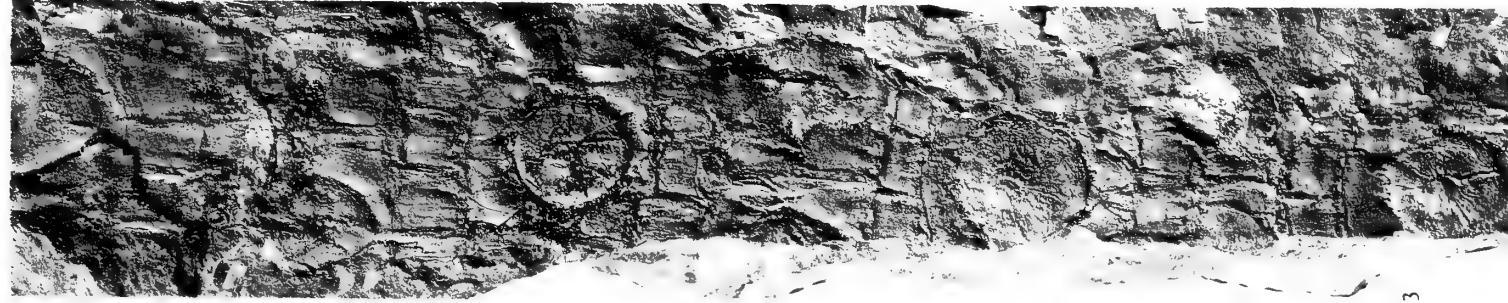
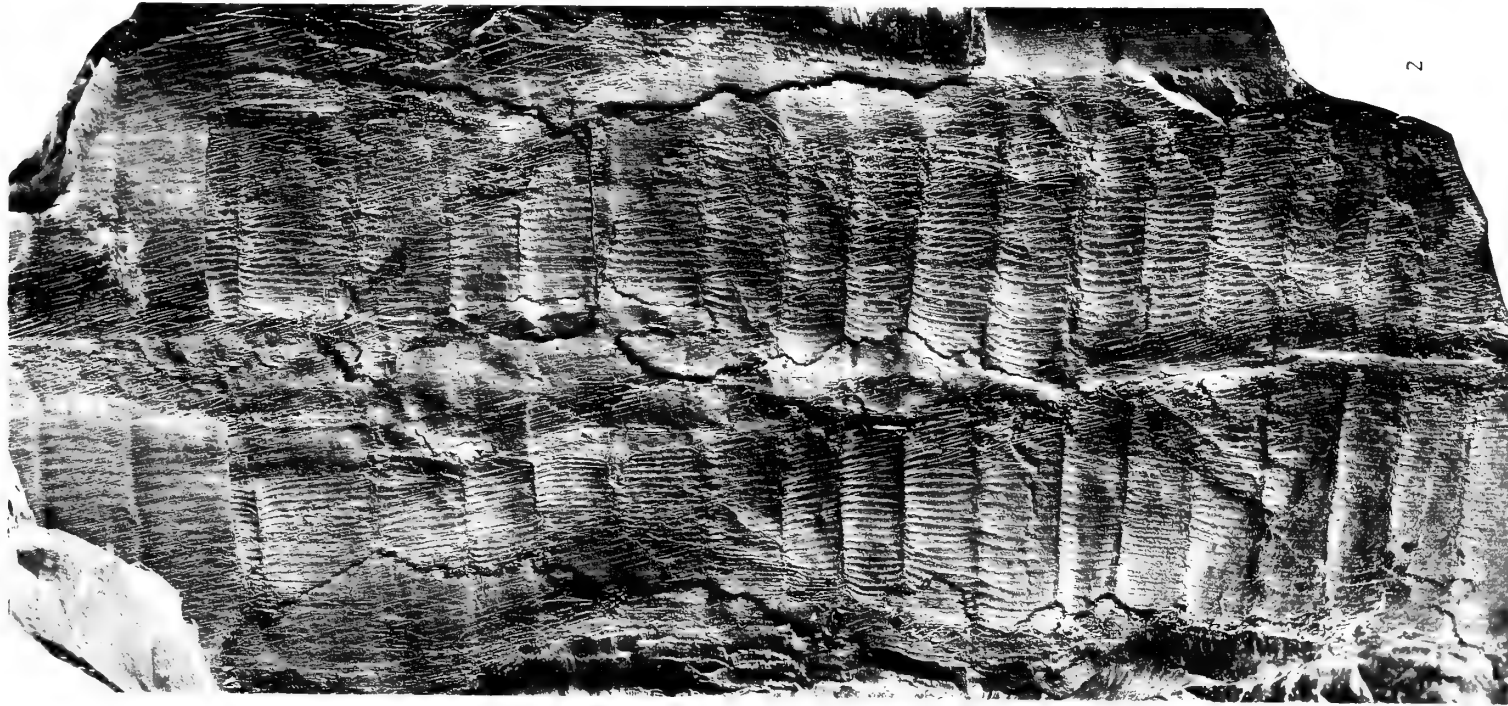
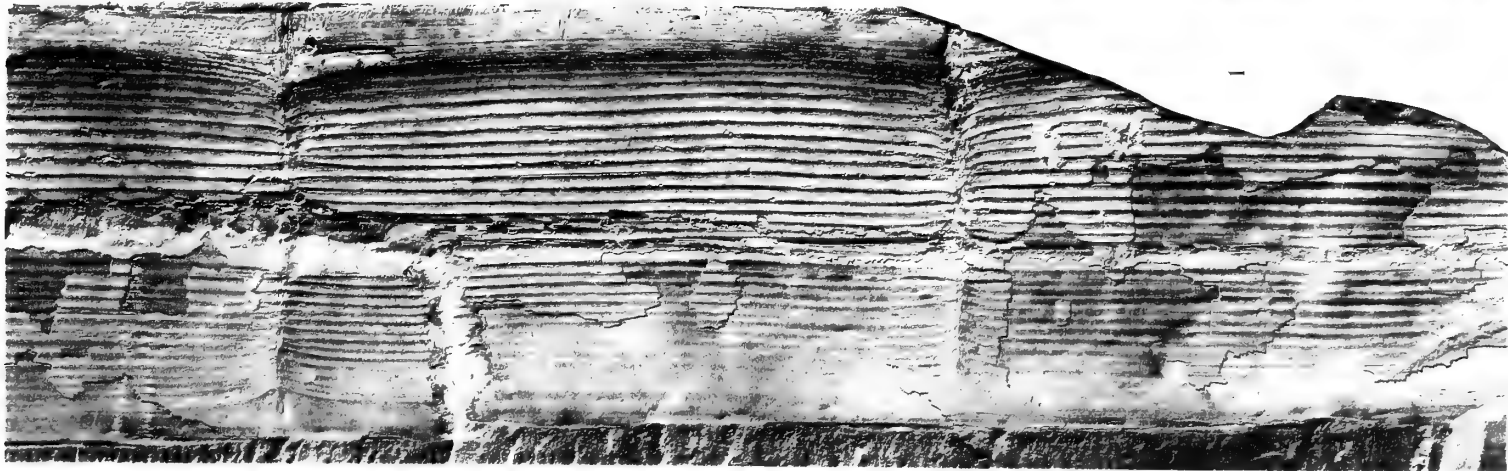






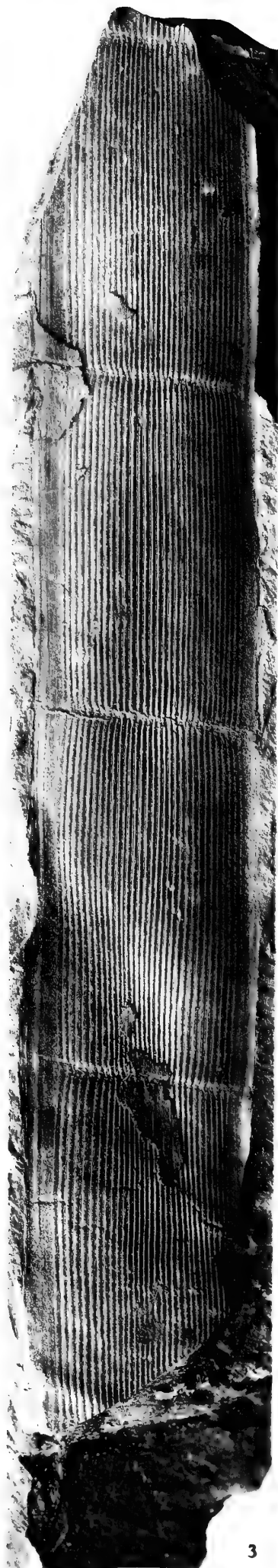












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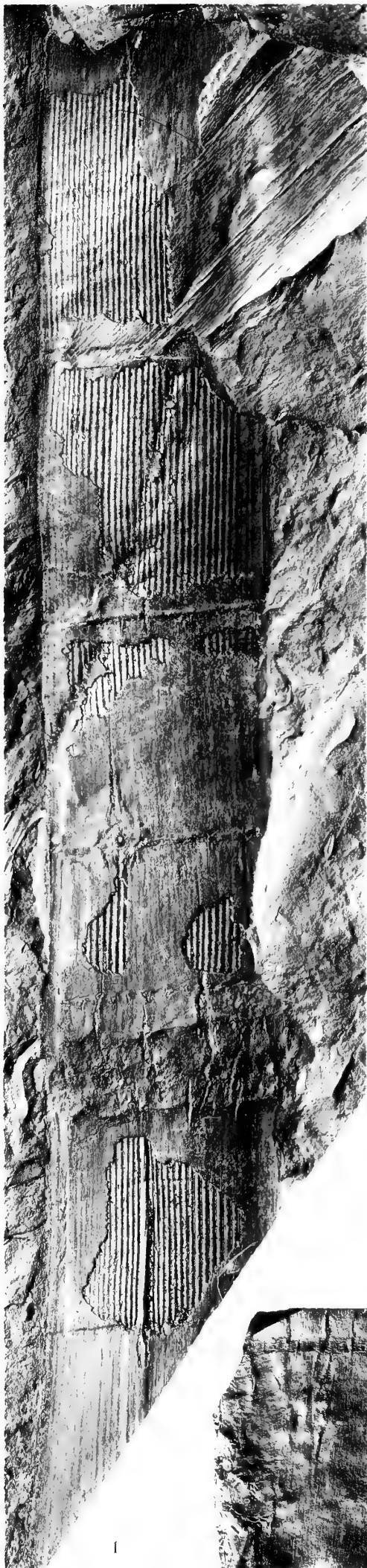


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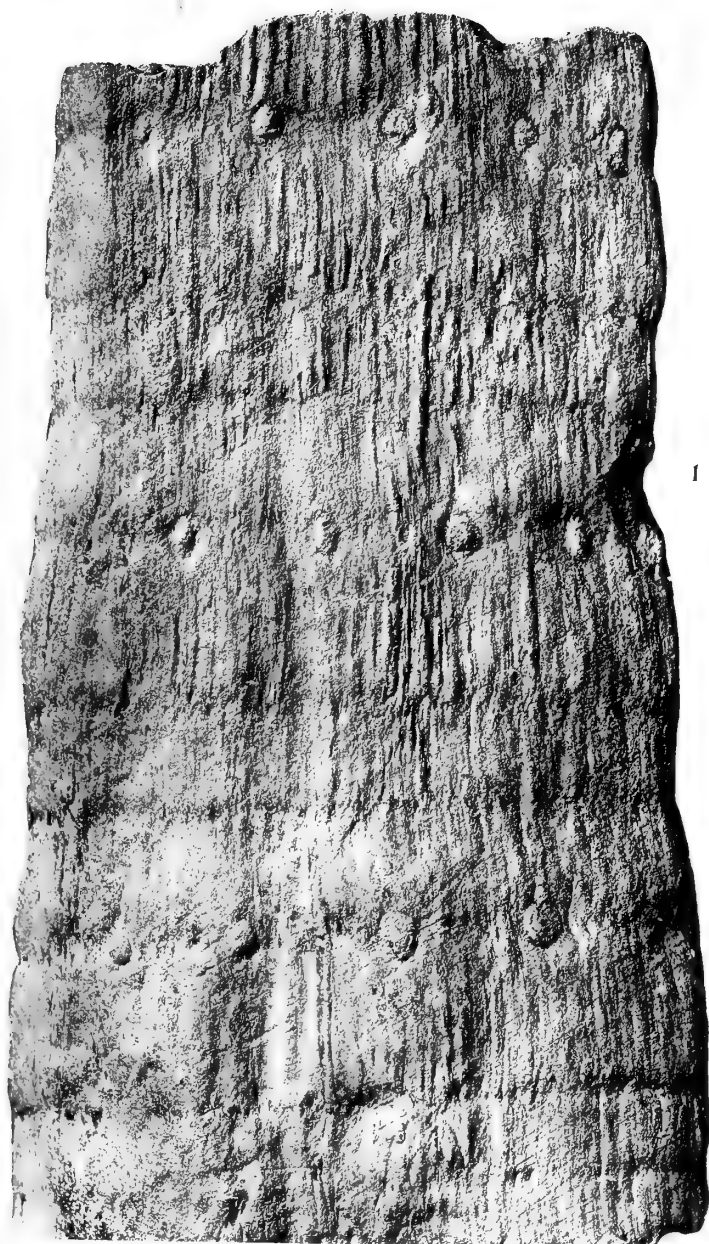


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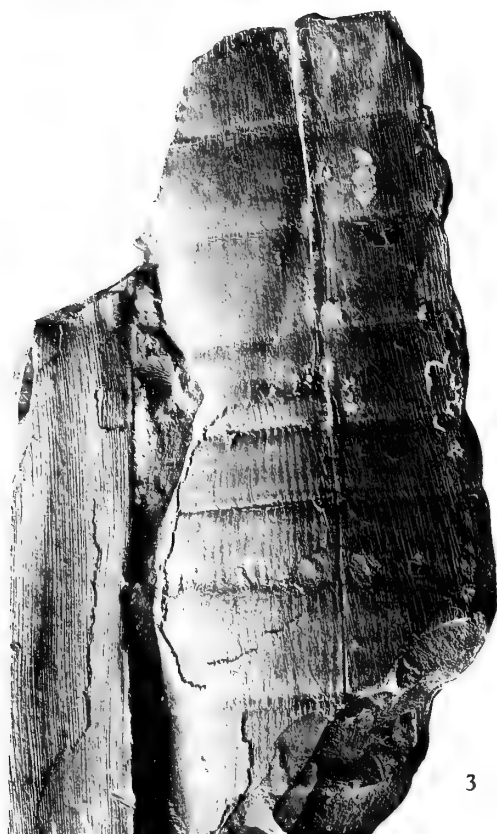


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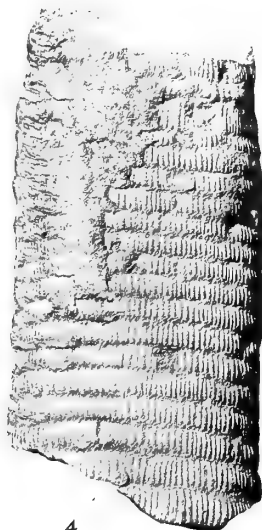


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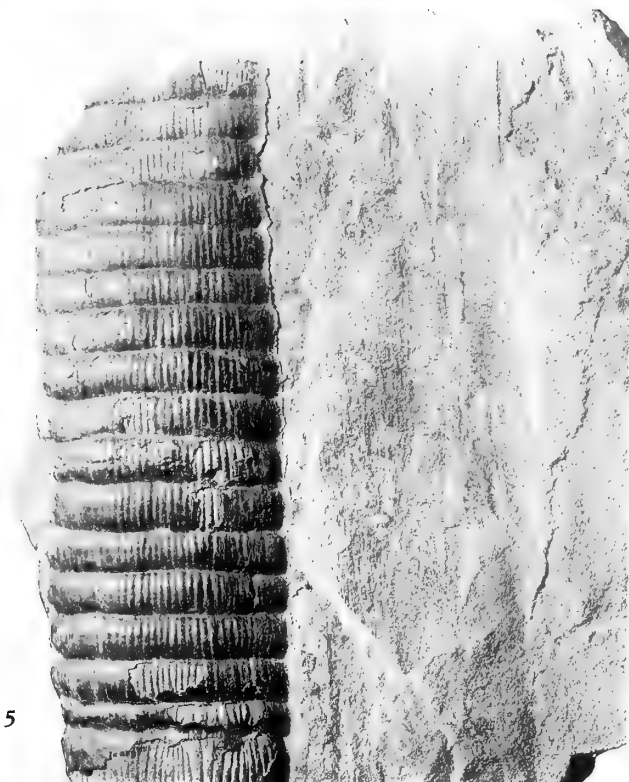
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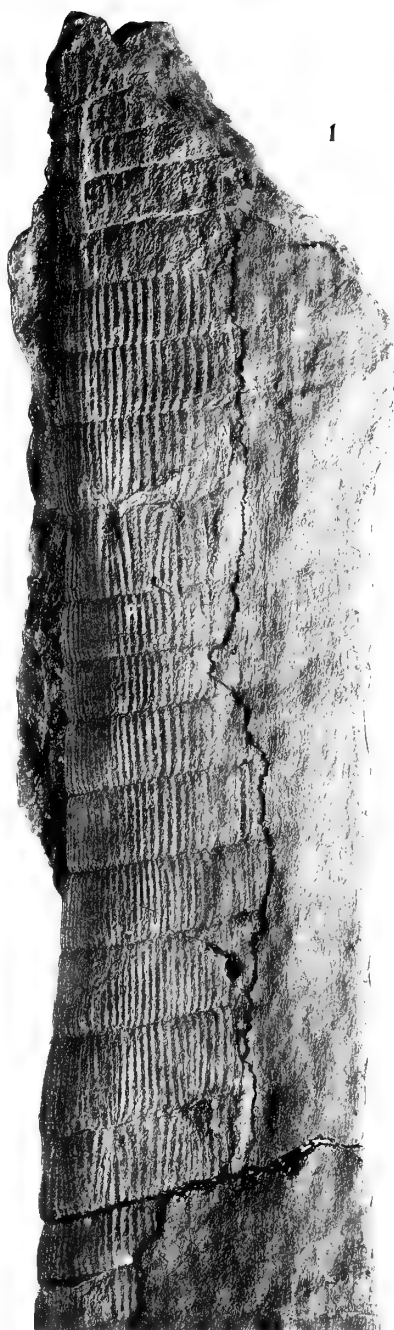




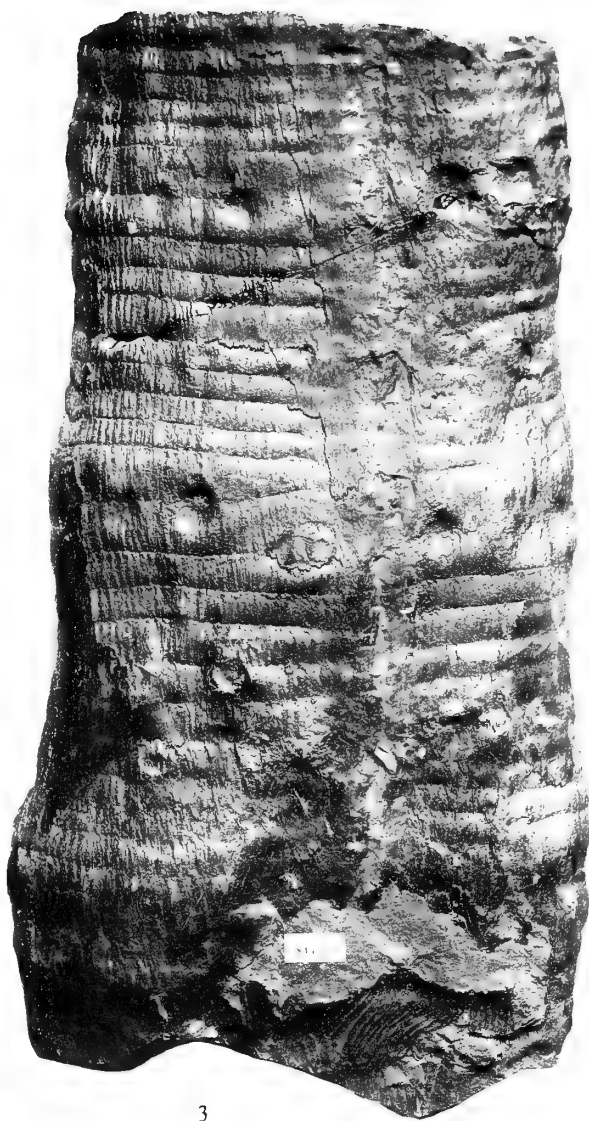




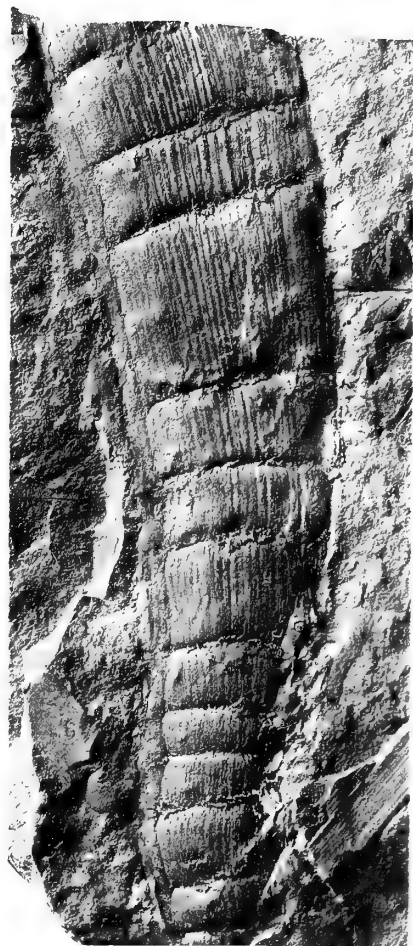
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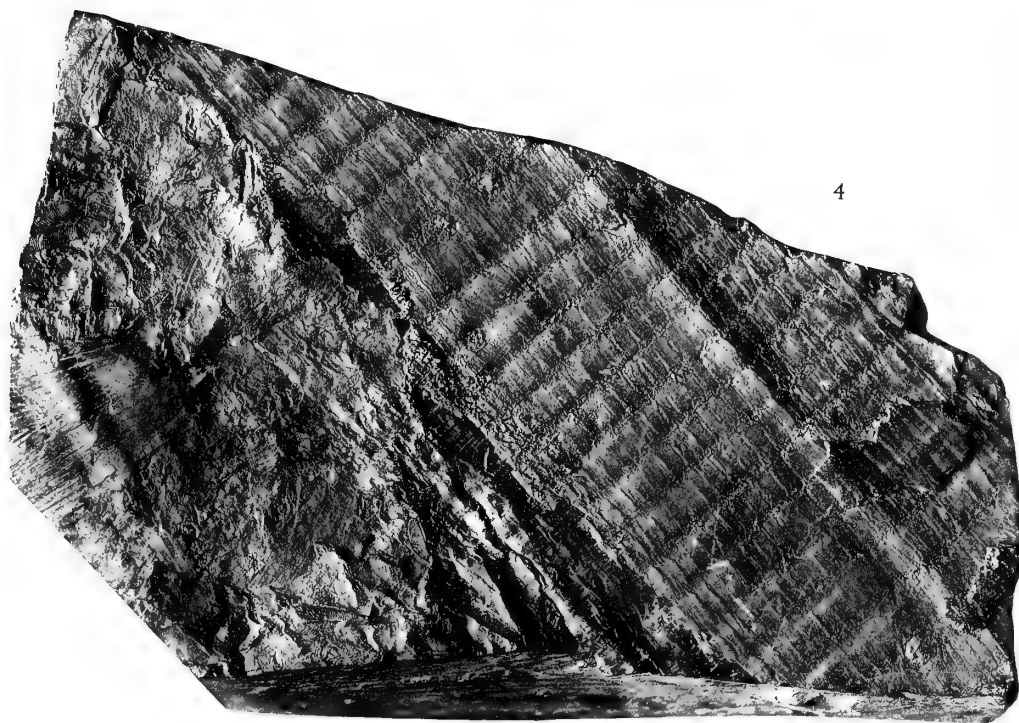
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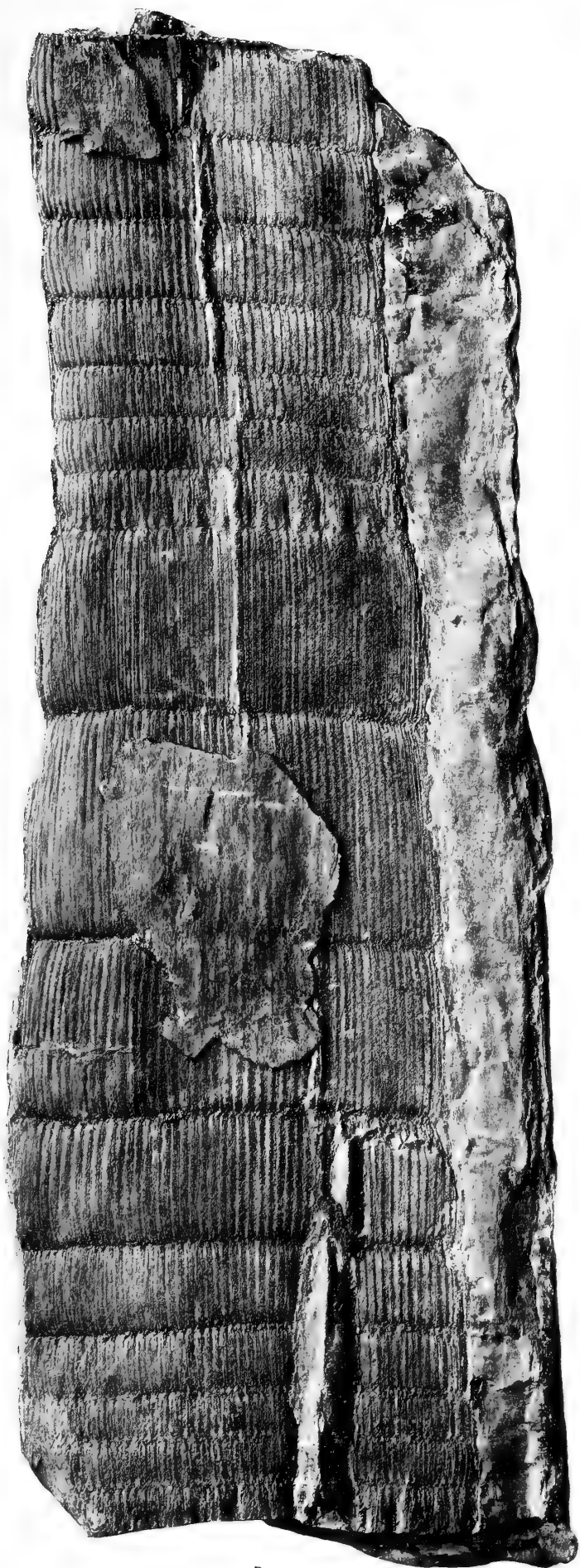


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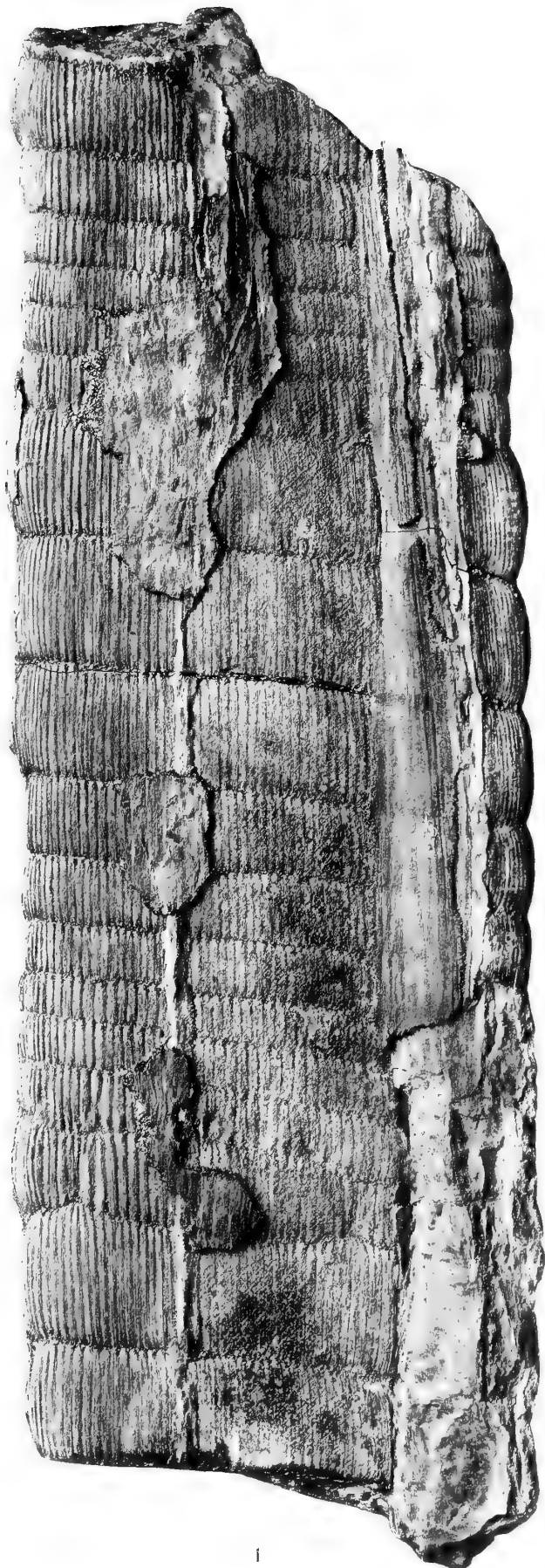


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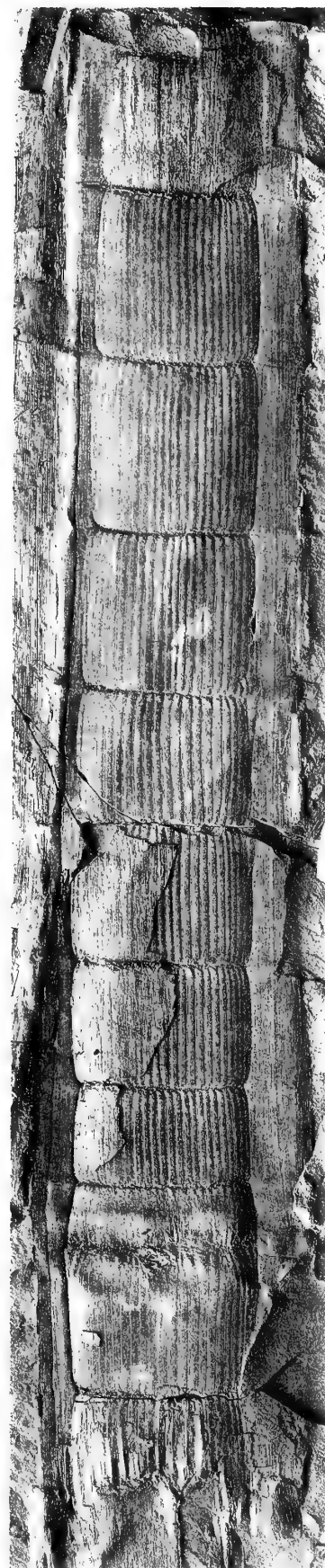


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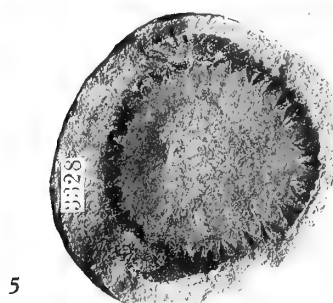


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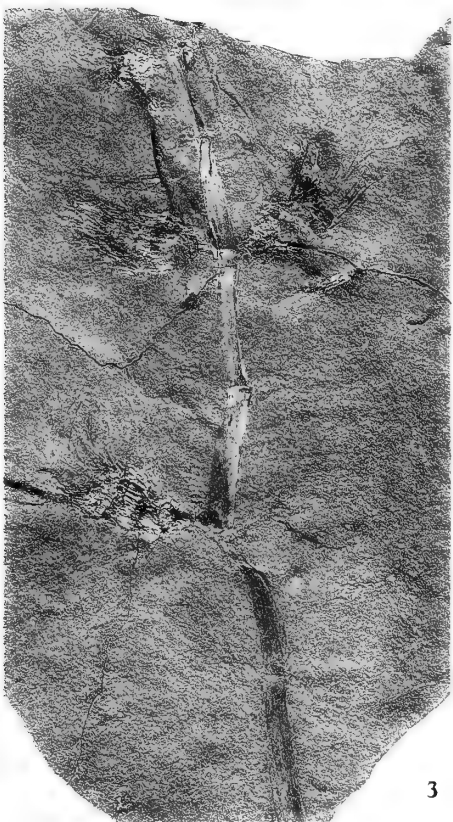




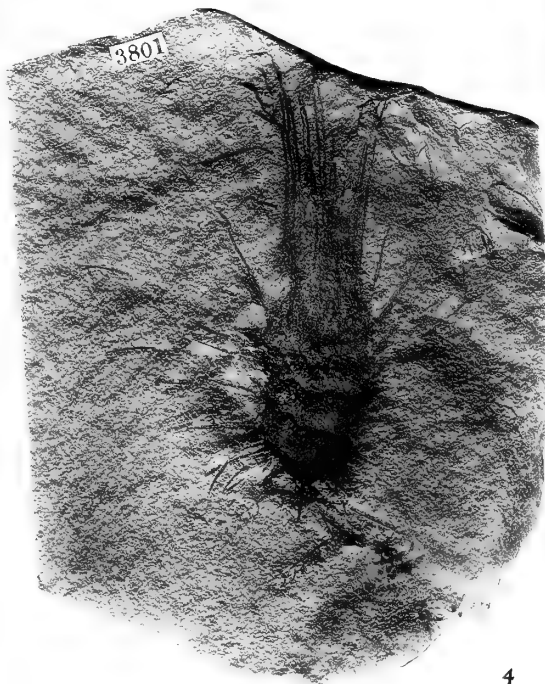
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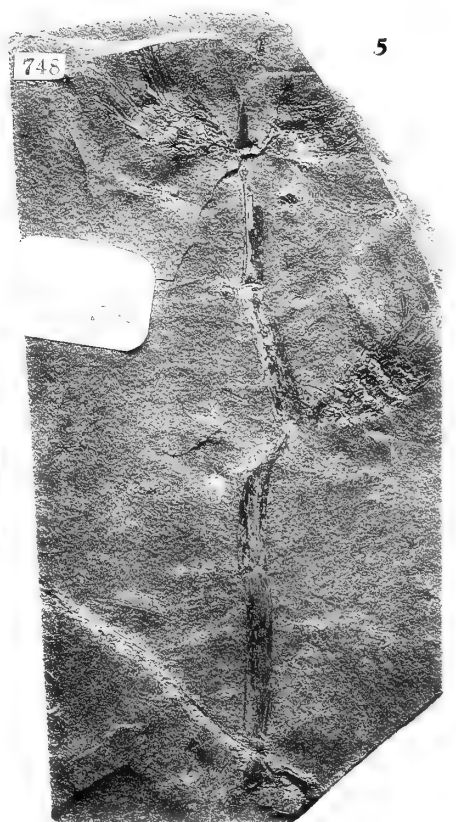


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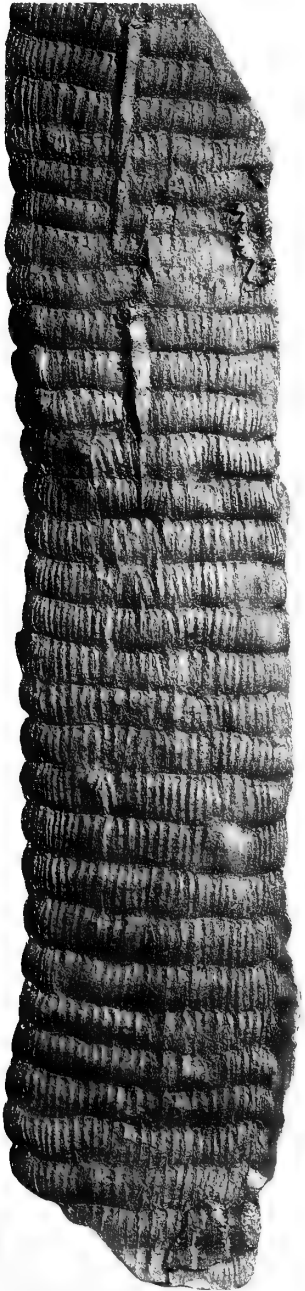


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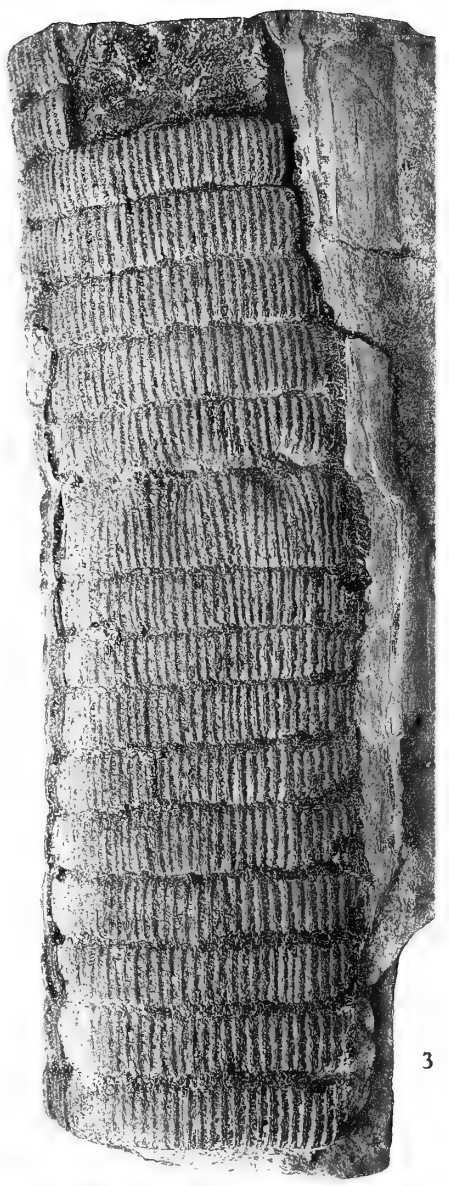




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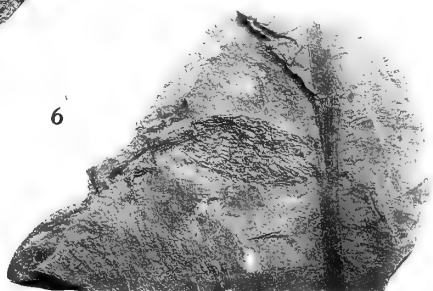


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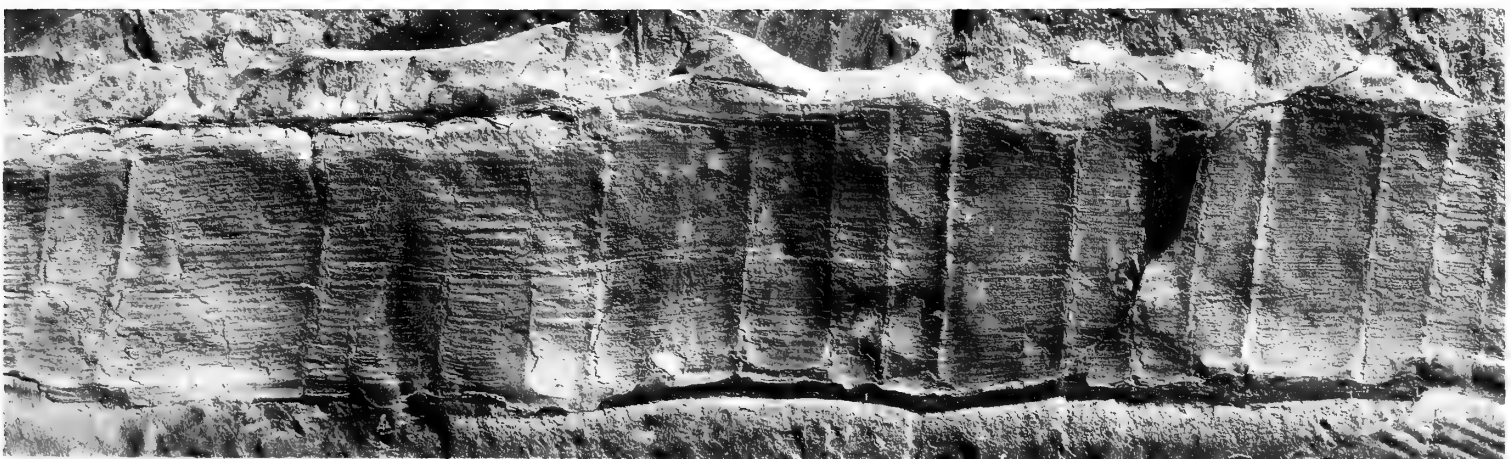
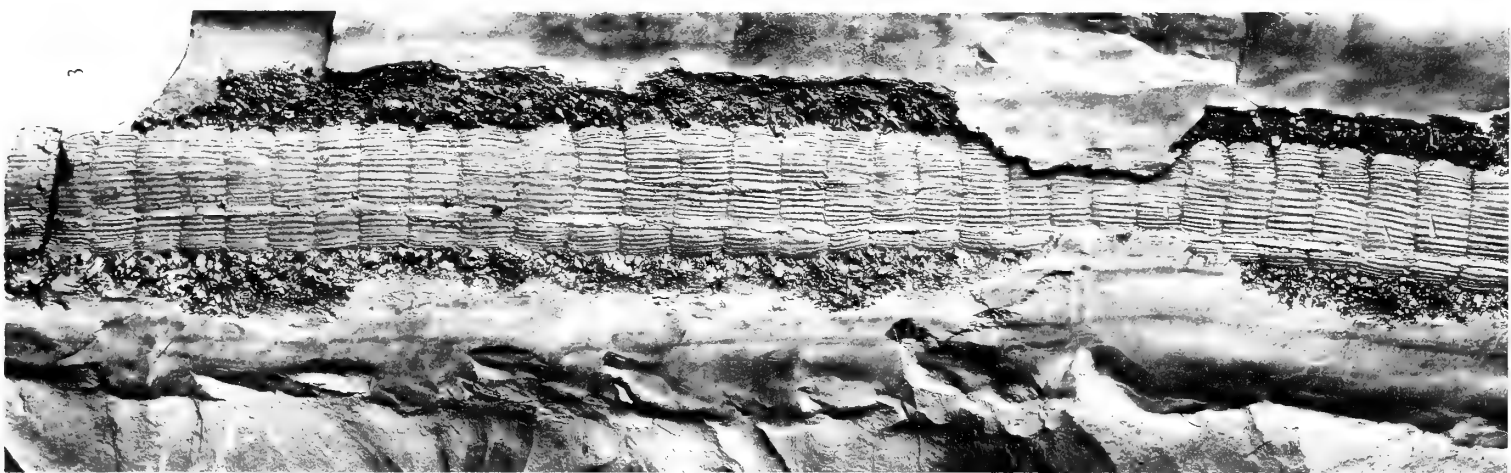
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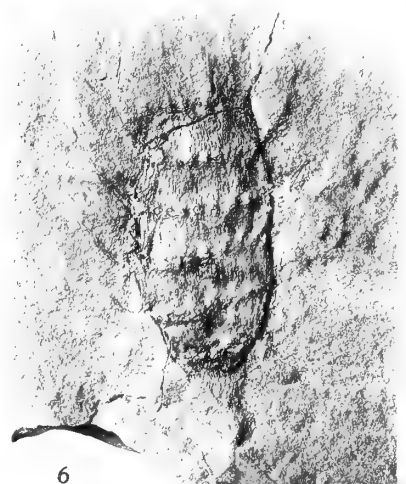
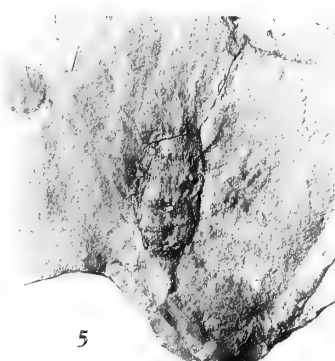
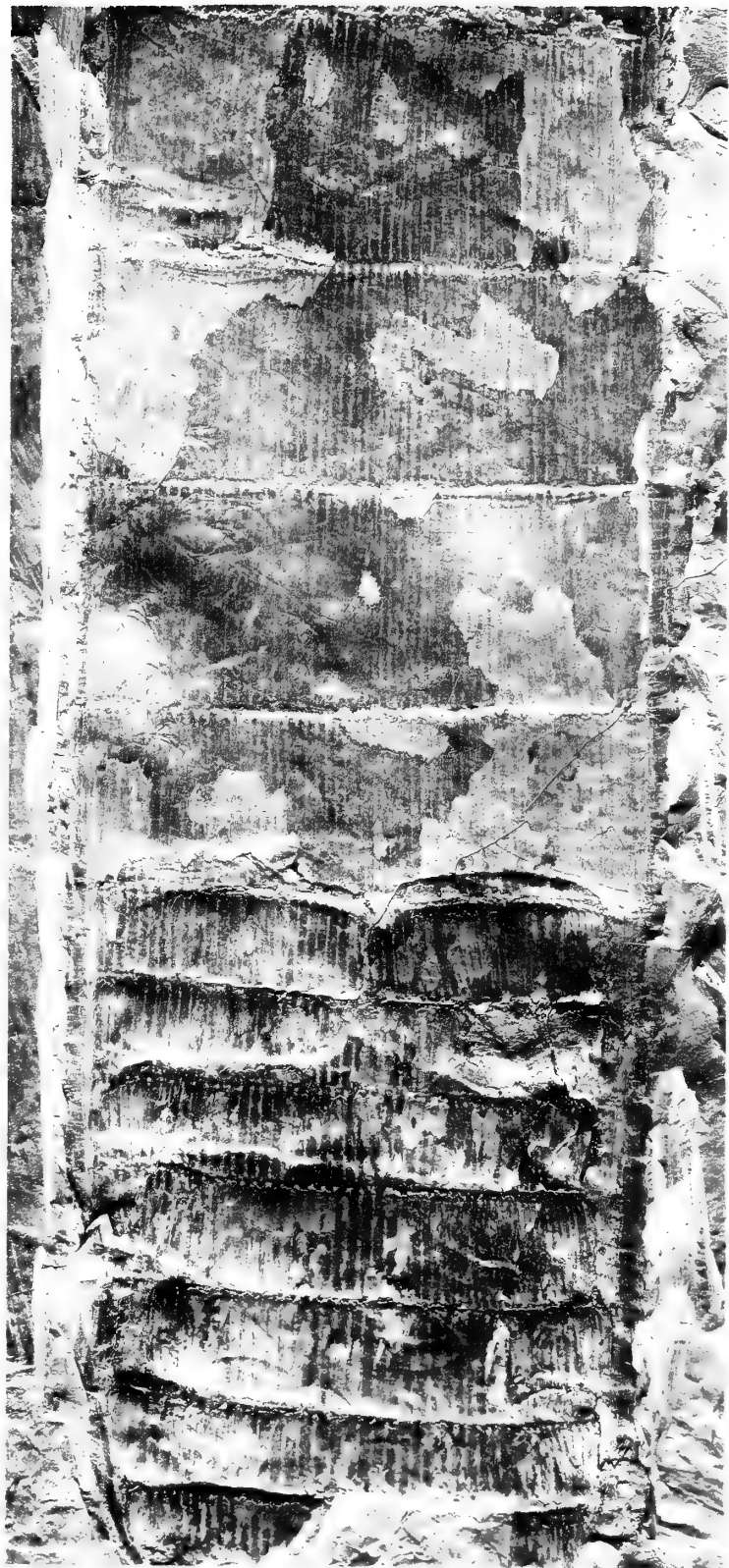
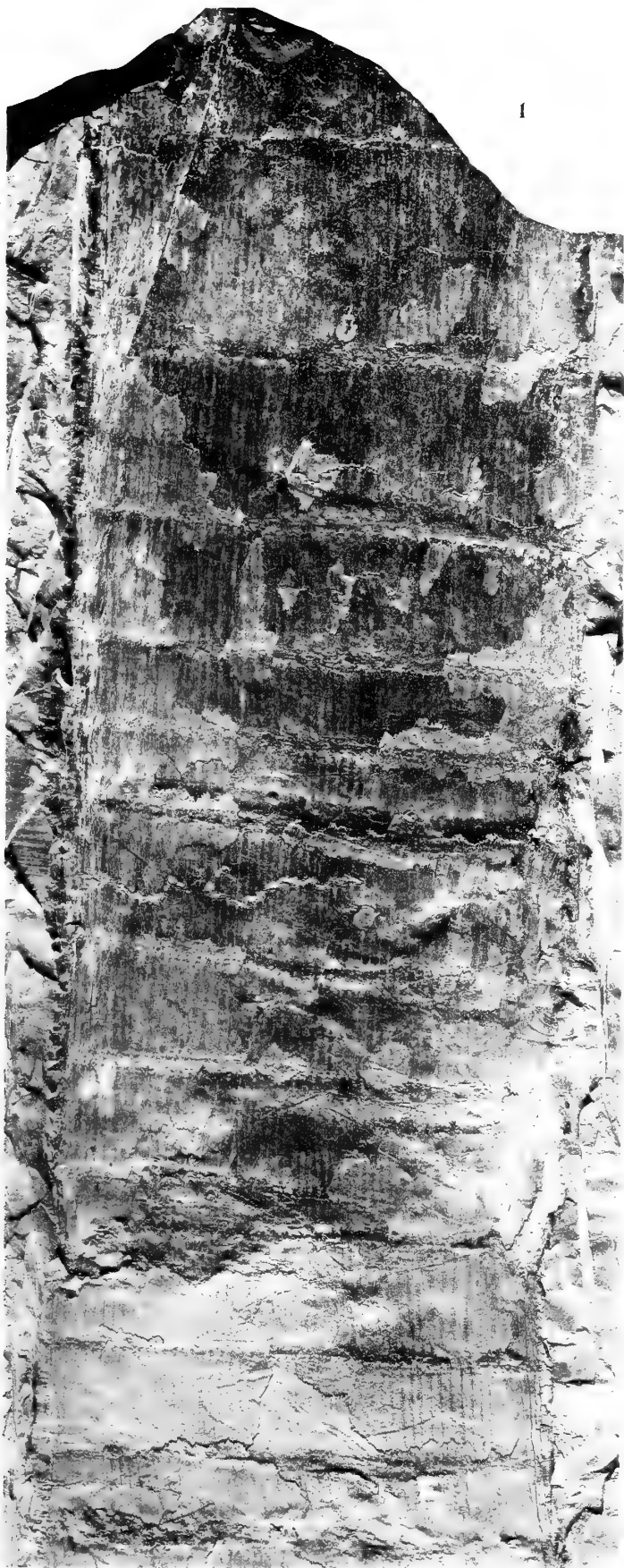
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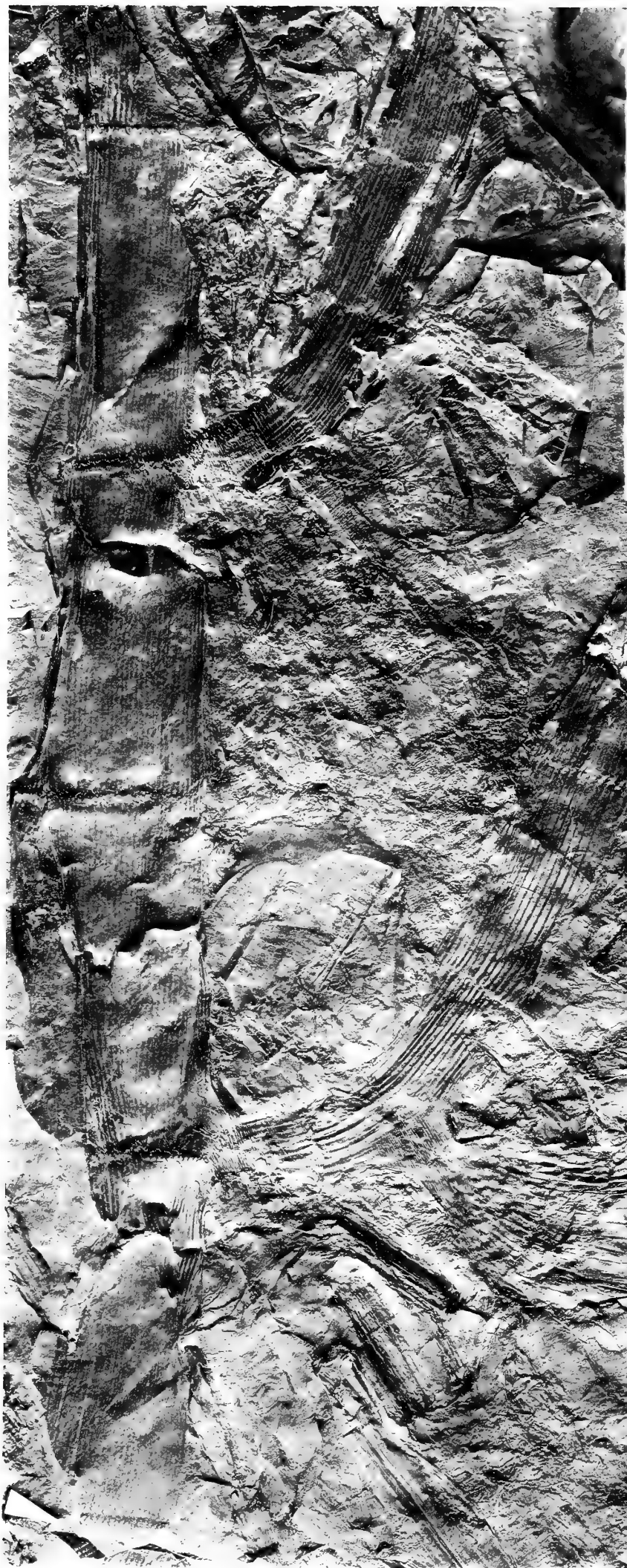




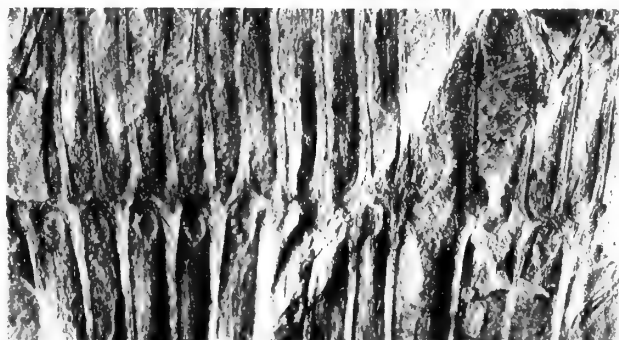








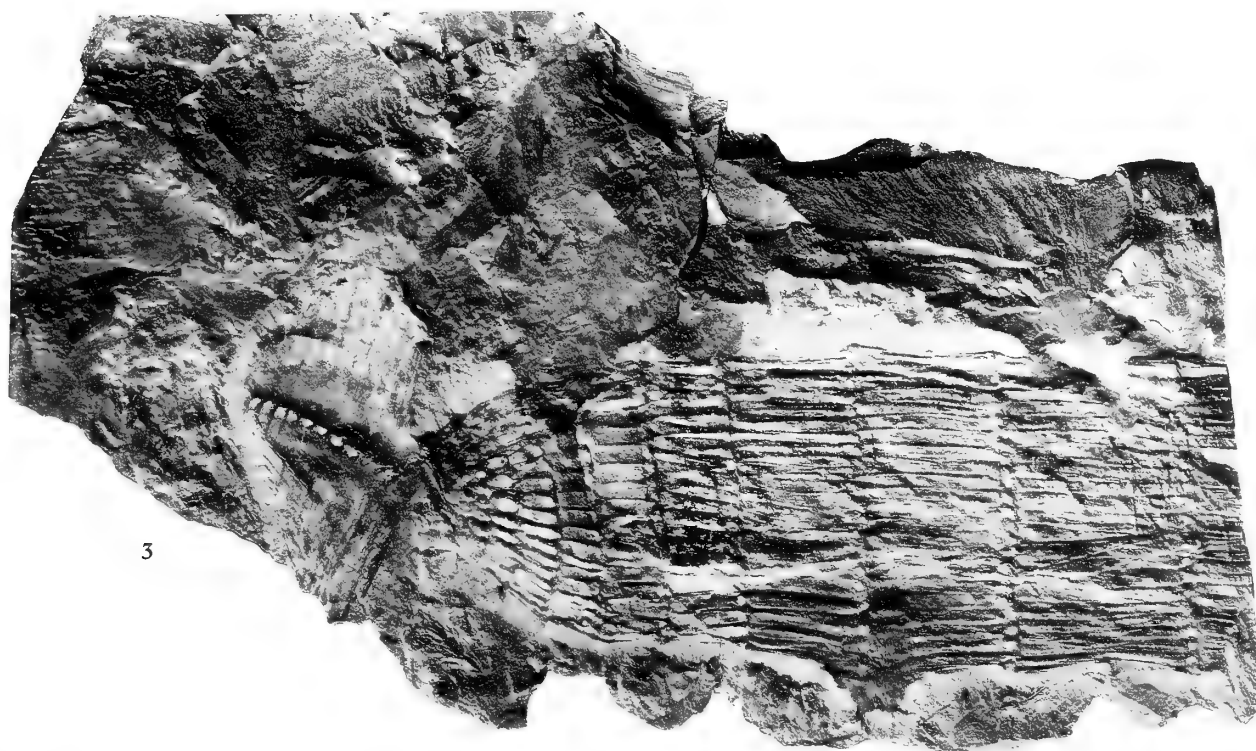
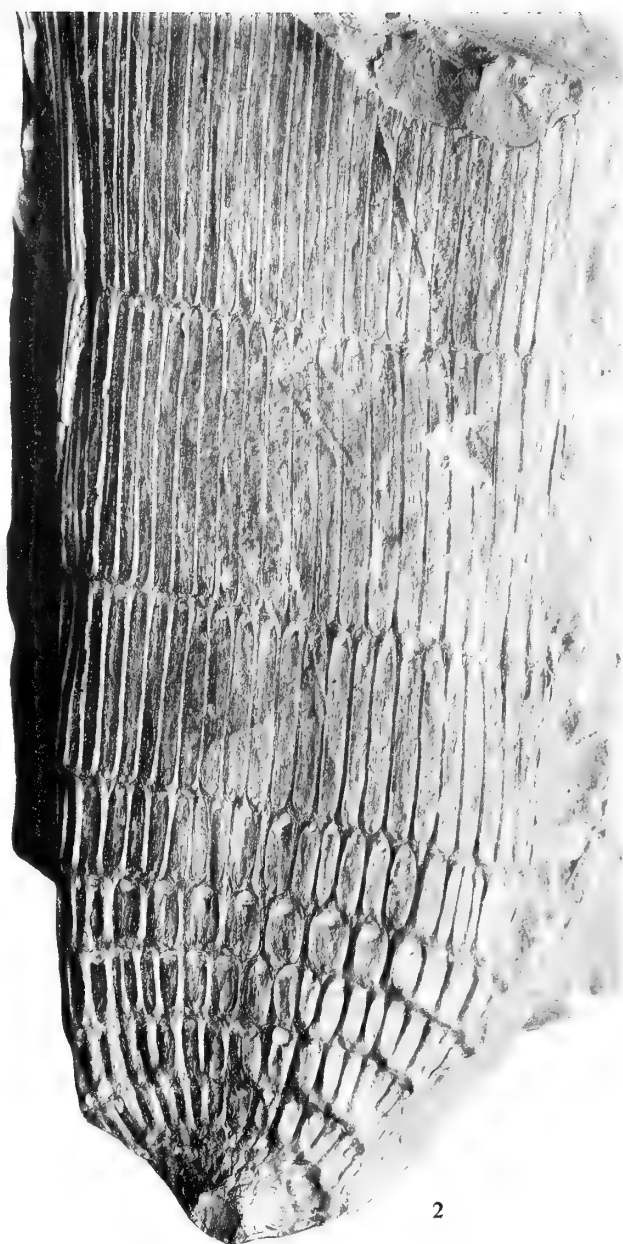
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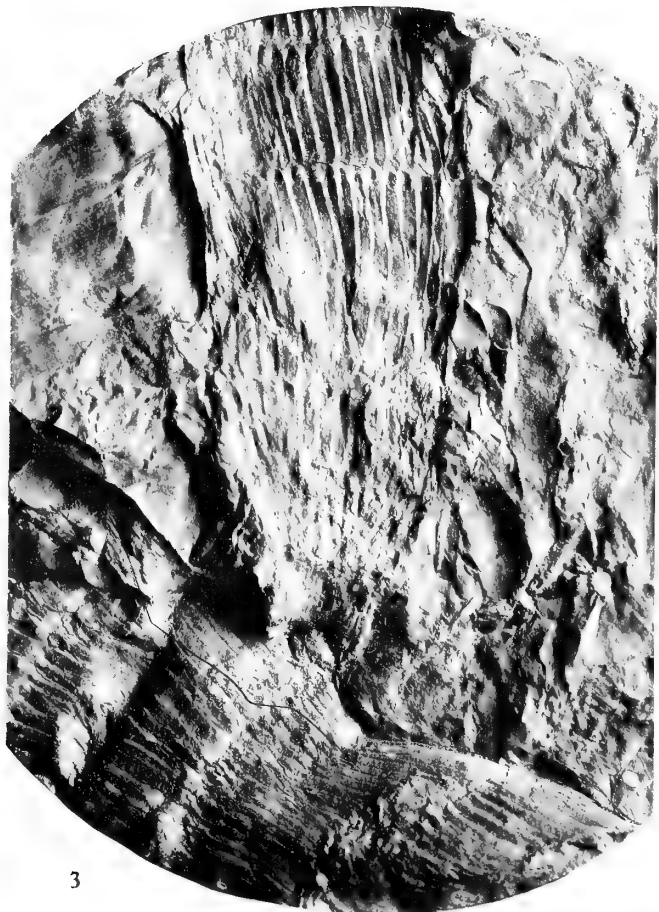
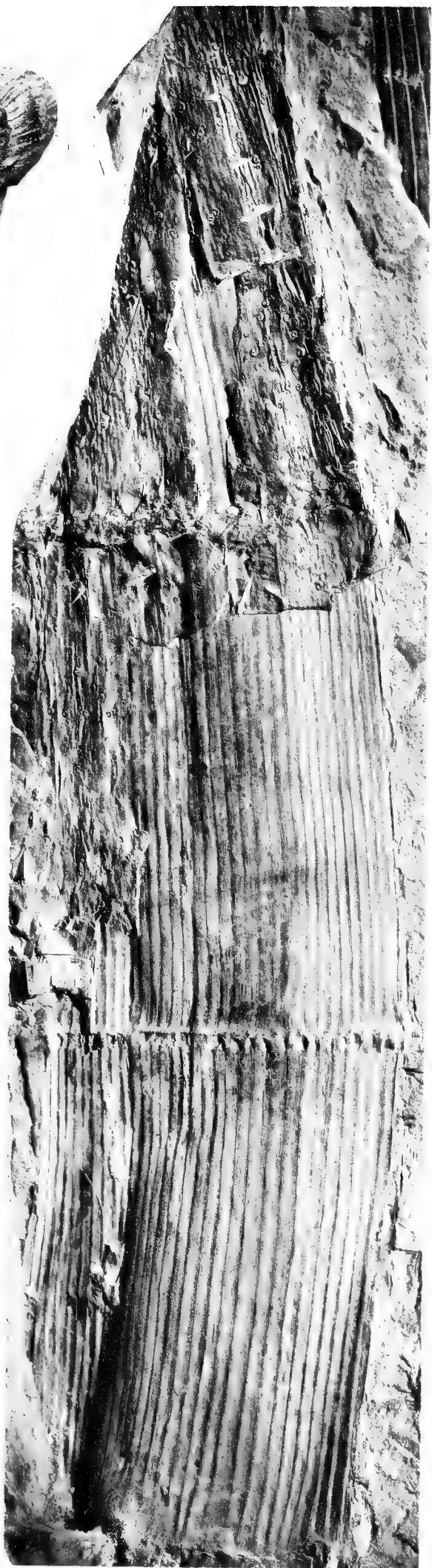




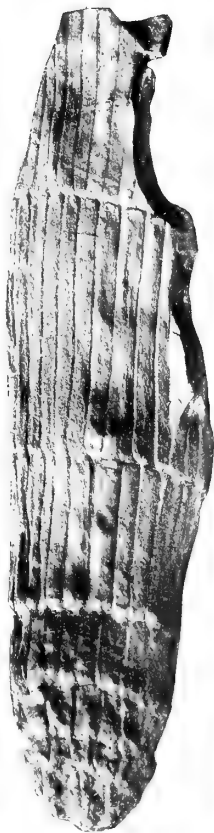


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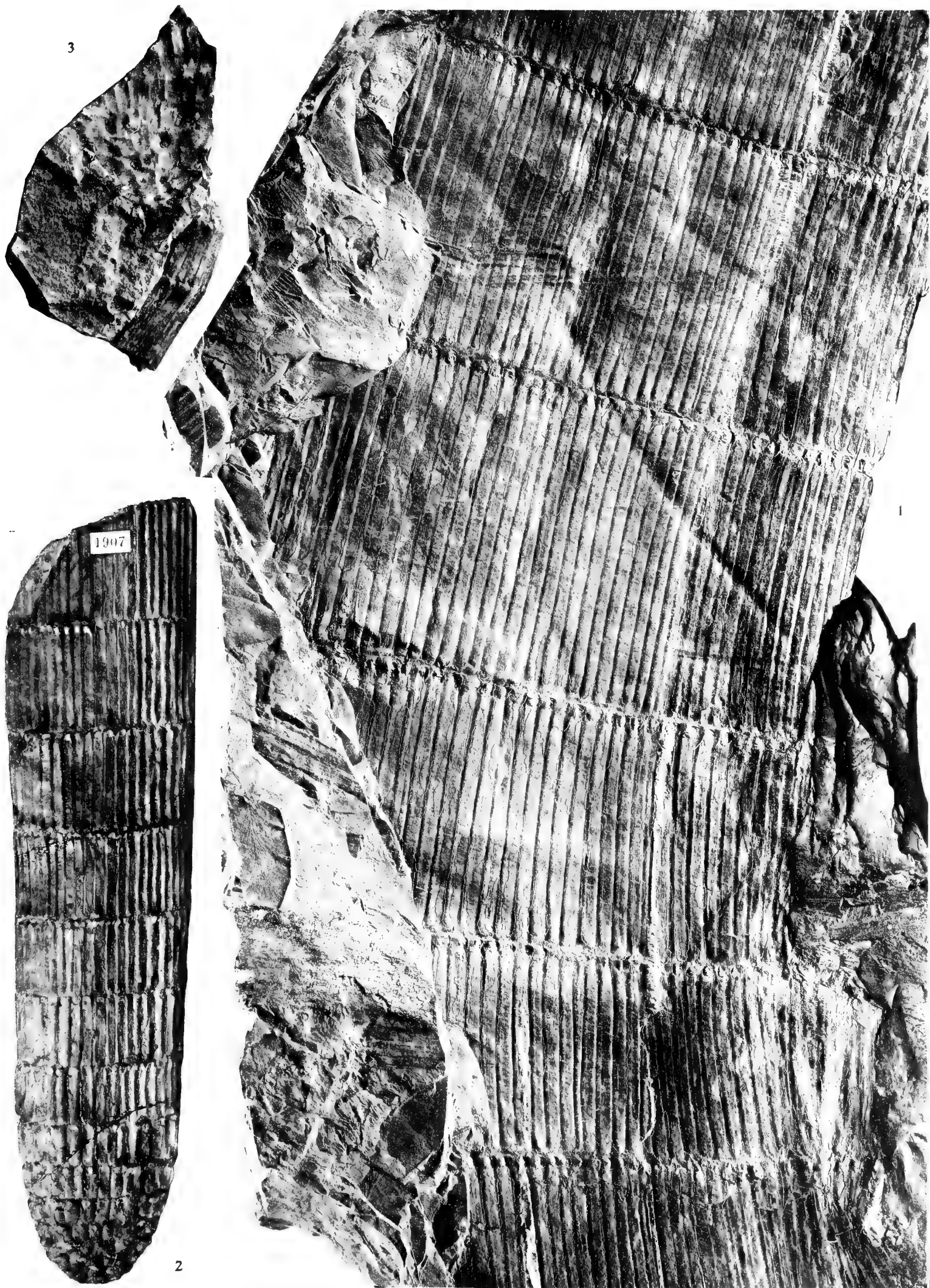
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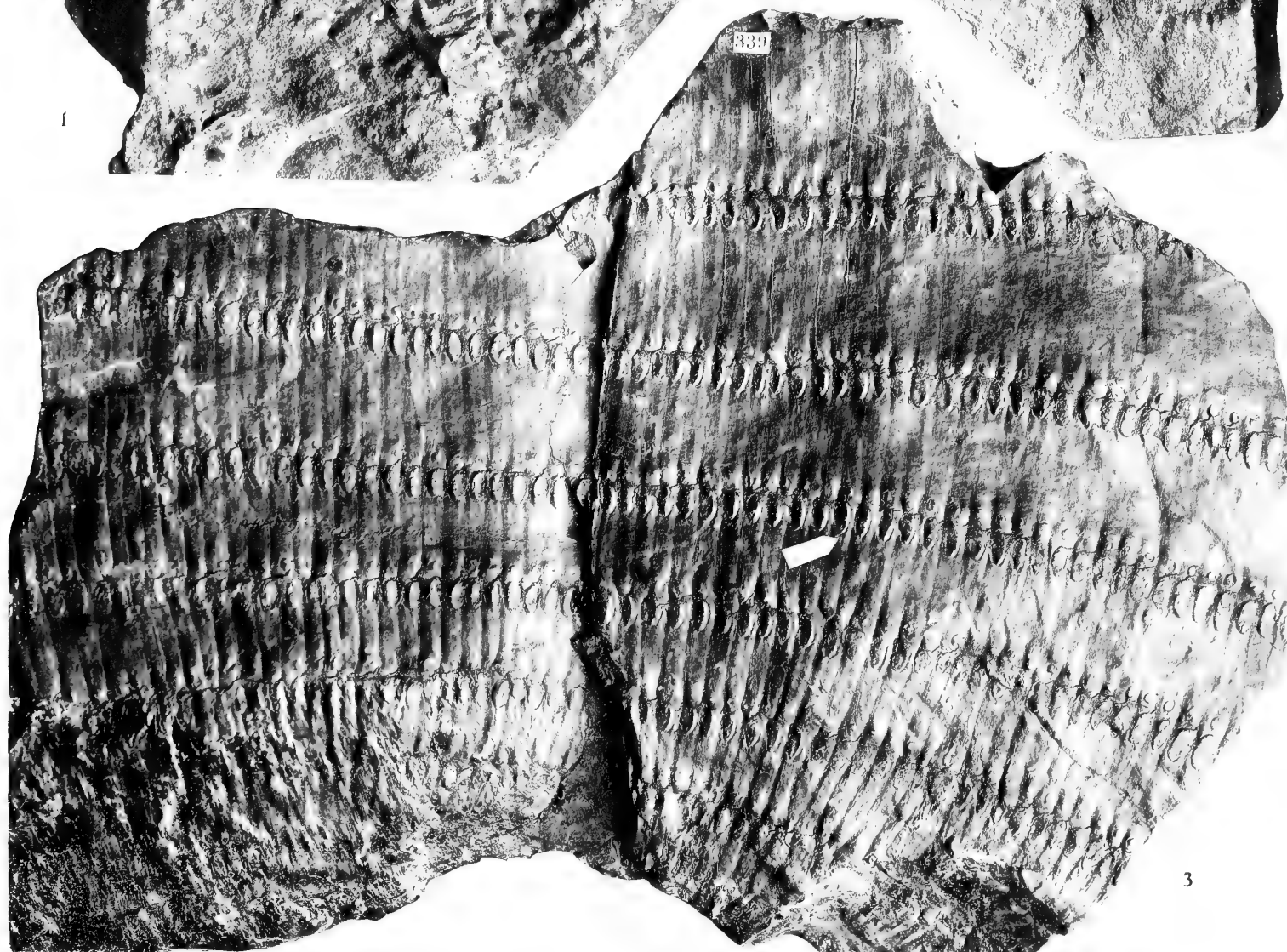
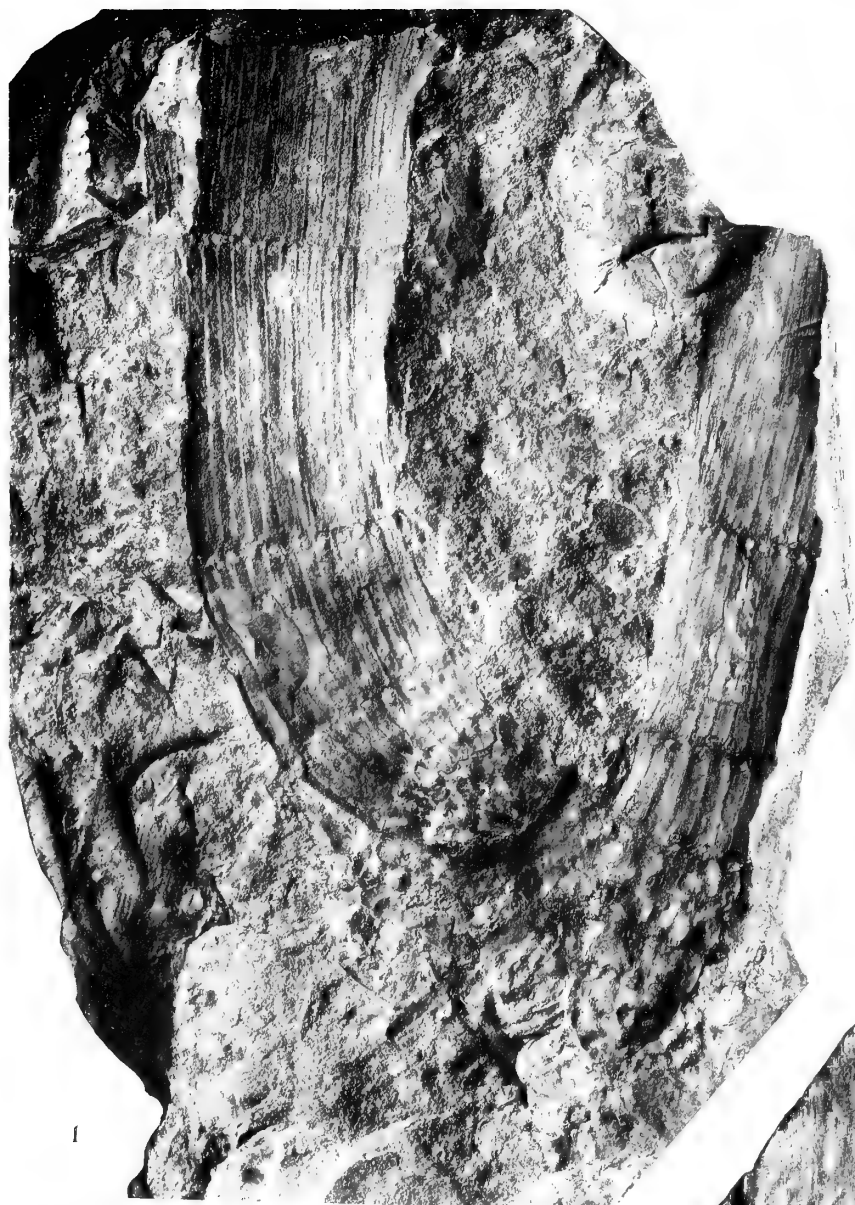
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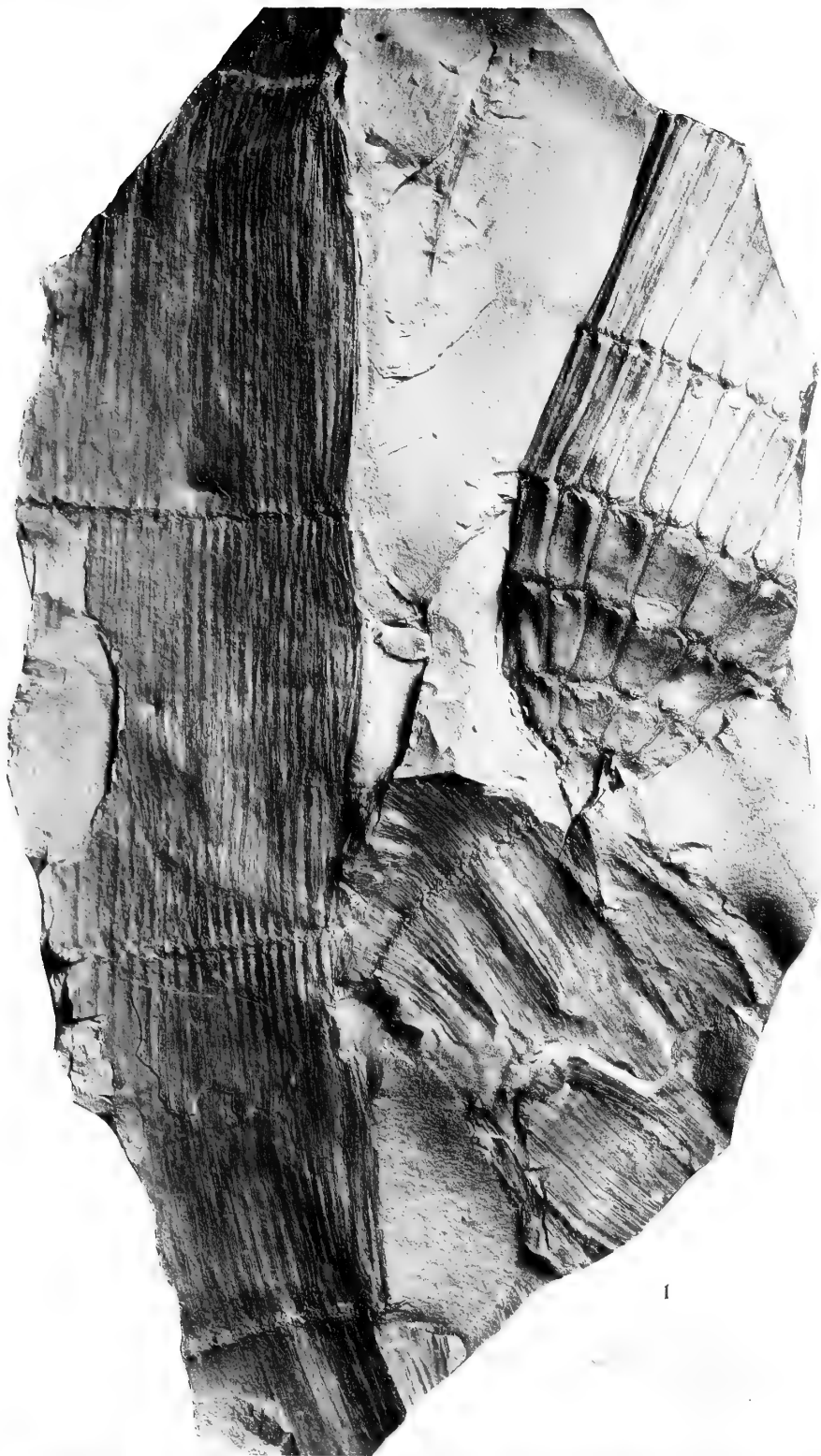




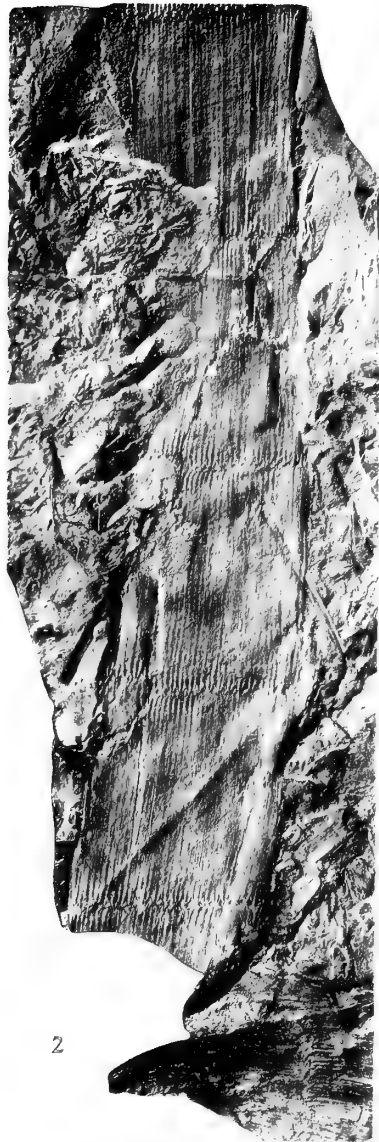












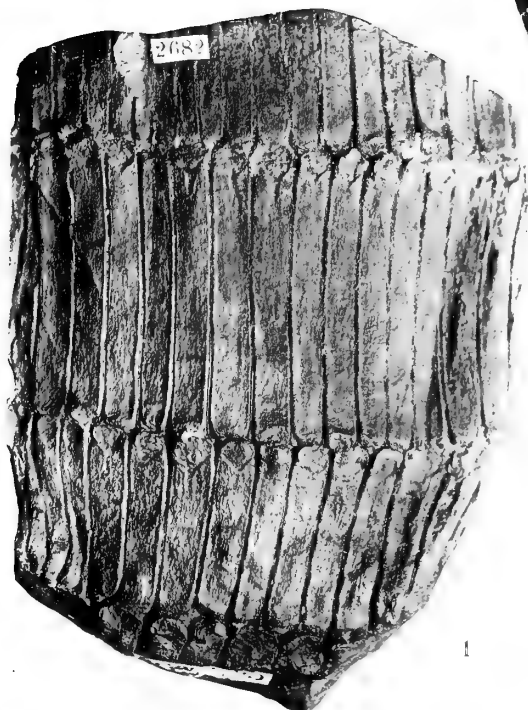
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*C. gigas* 1577-55



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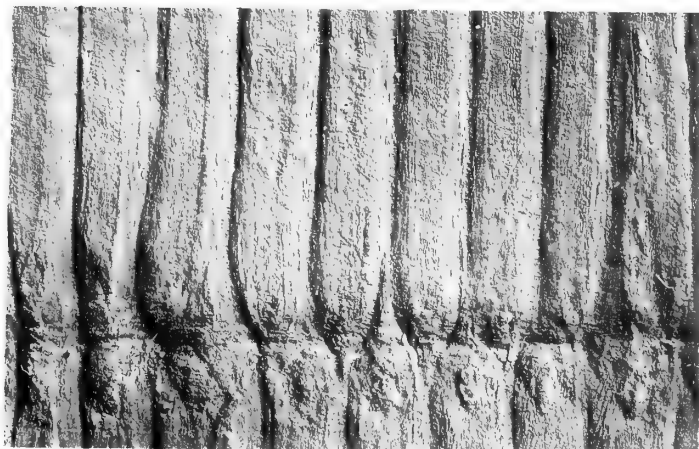
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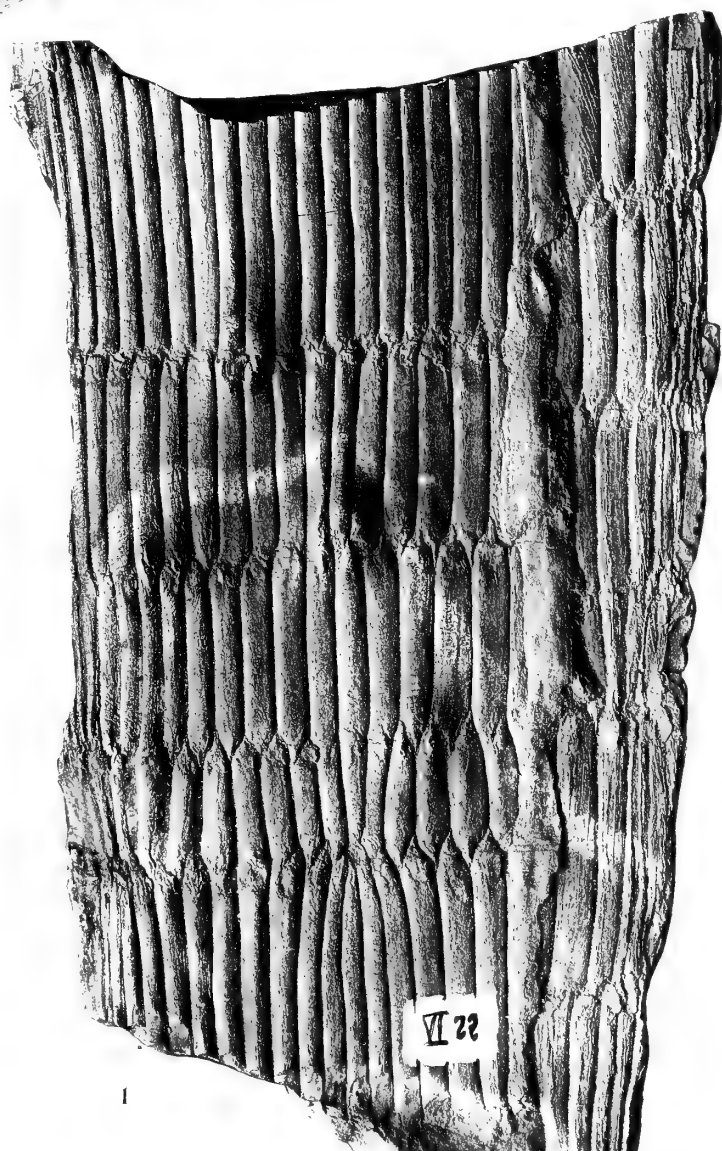
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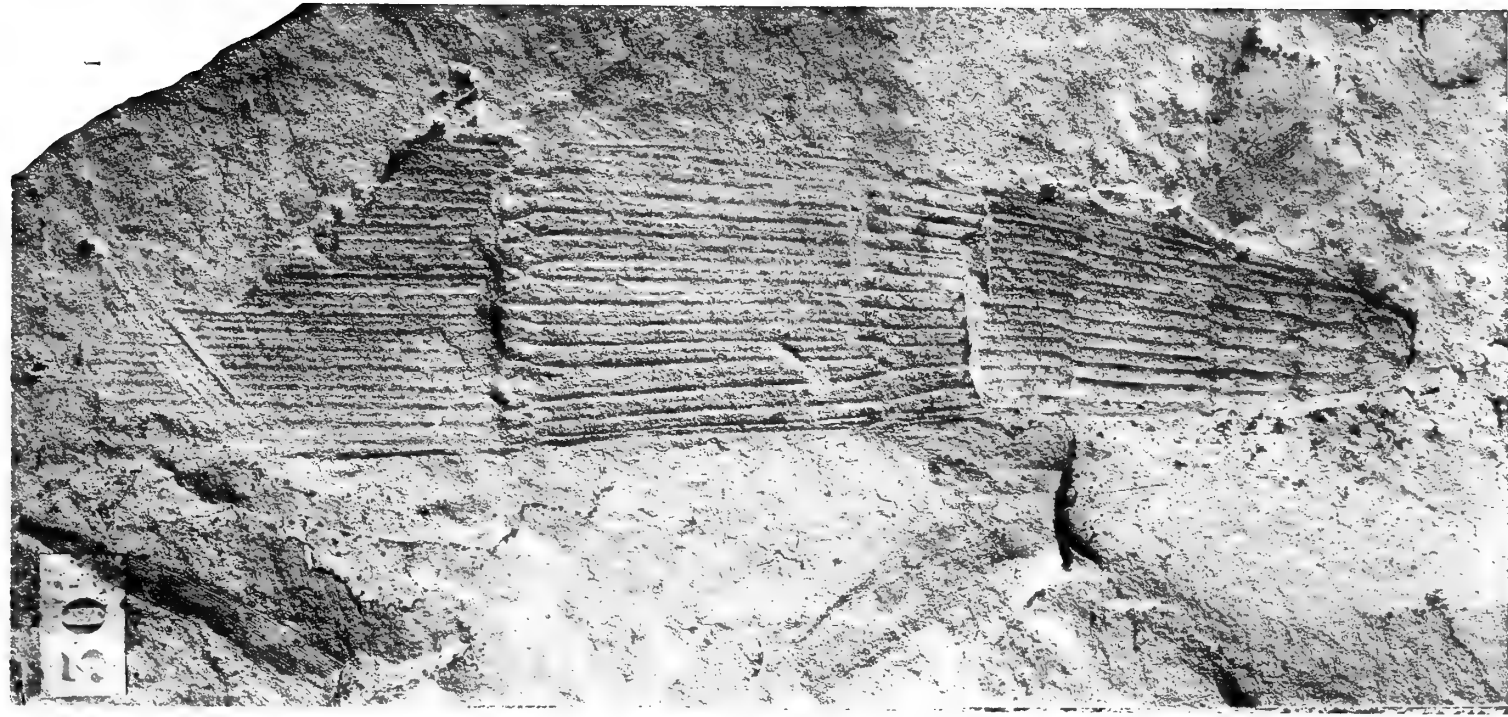
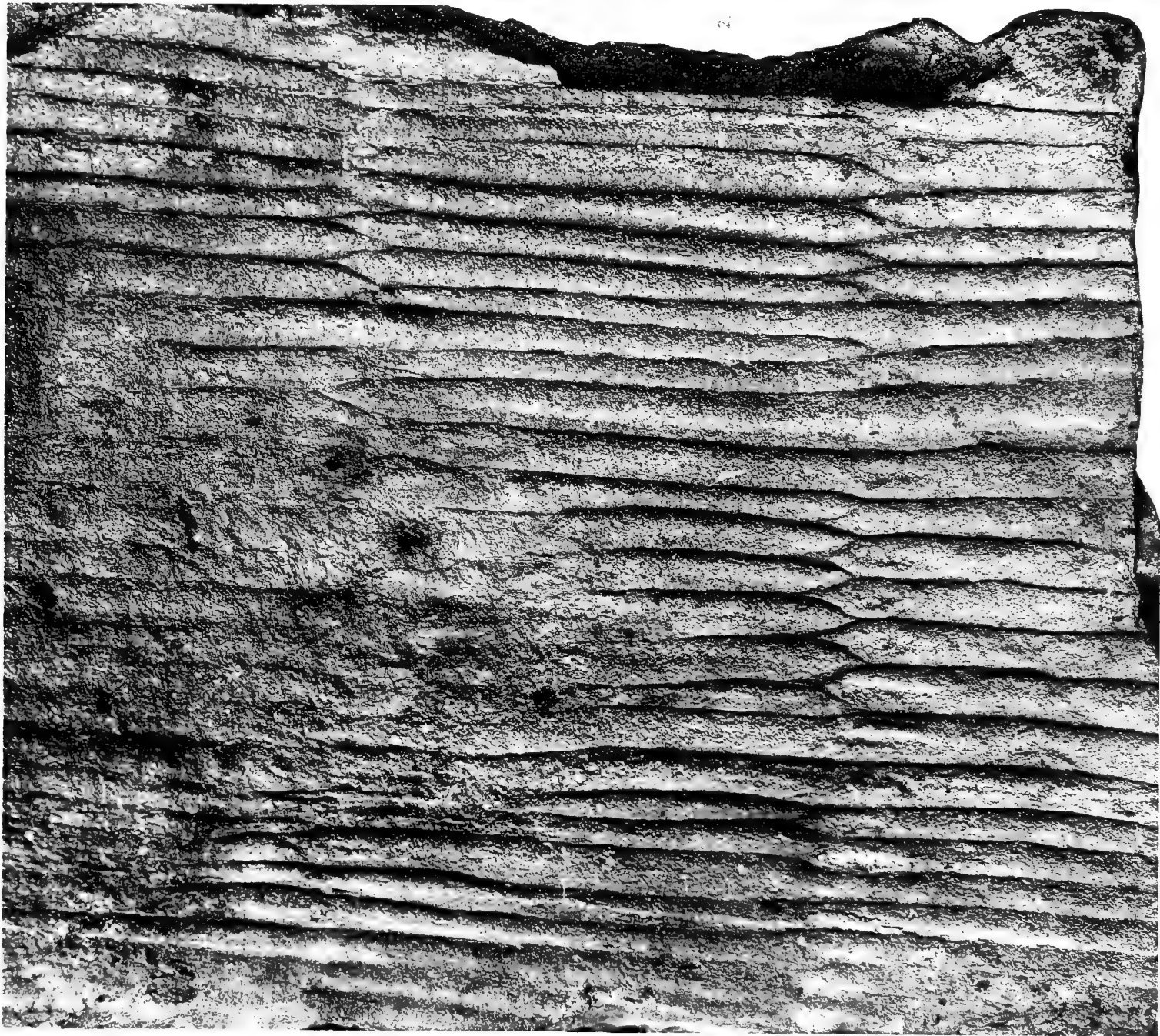
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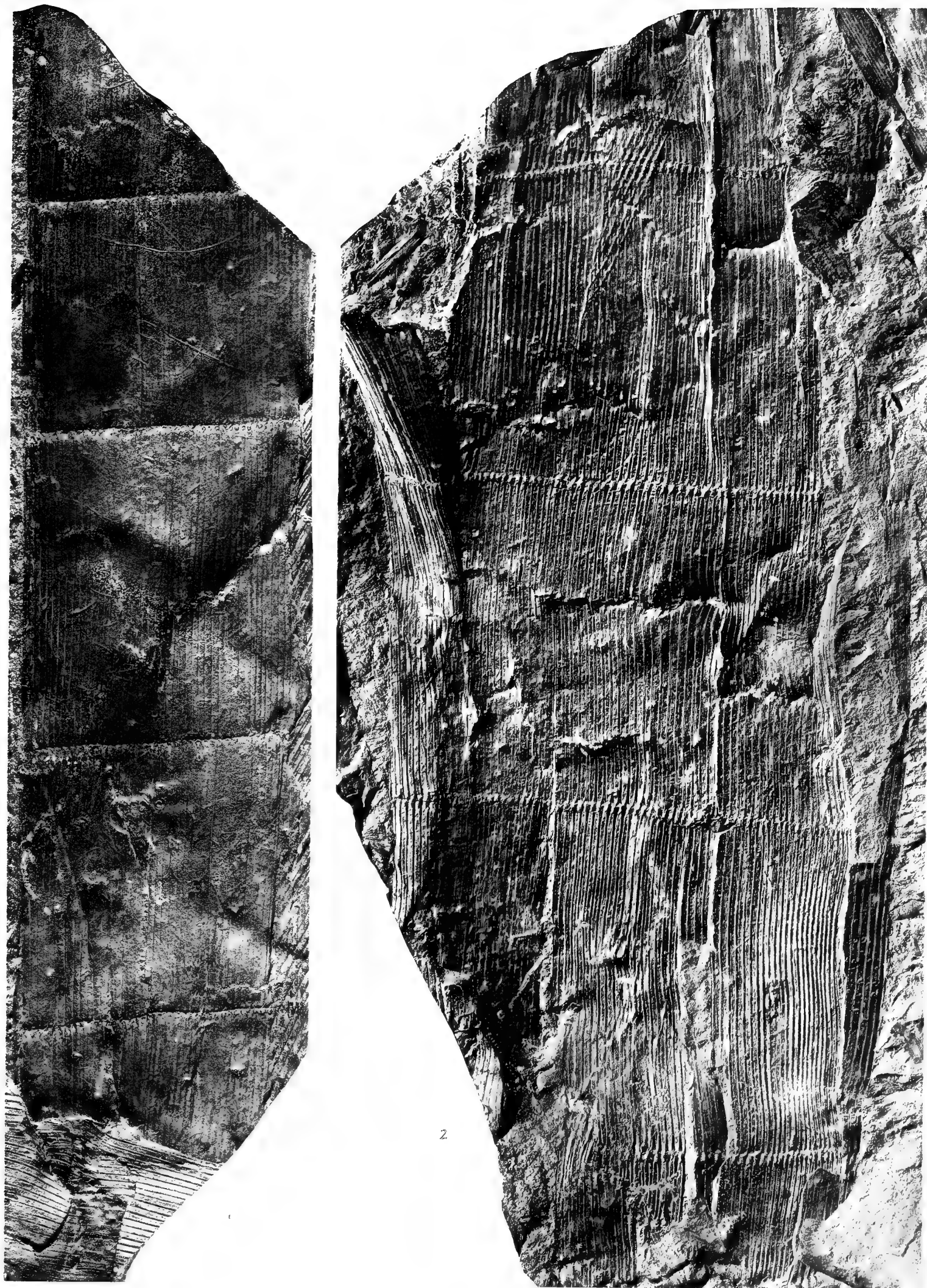










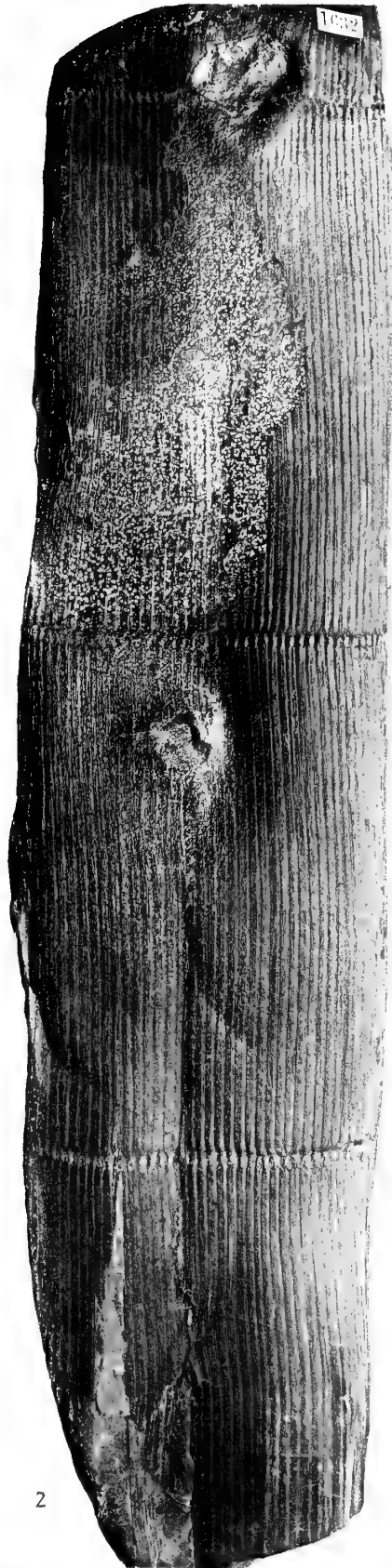




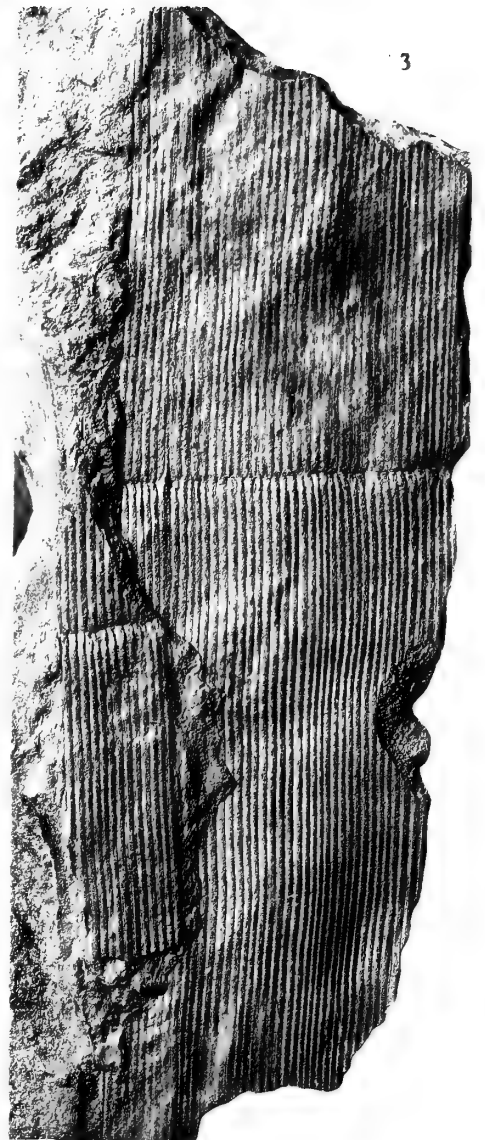
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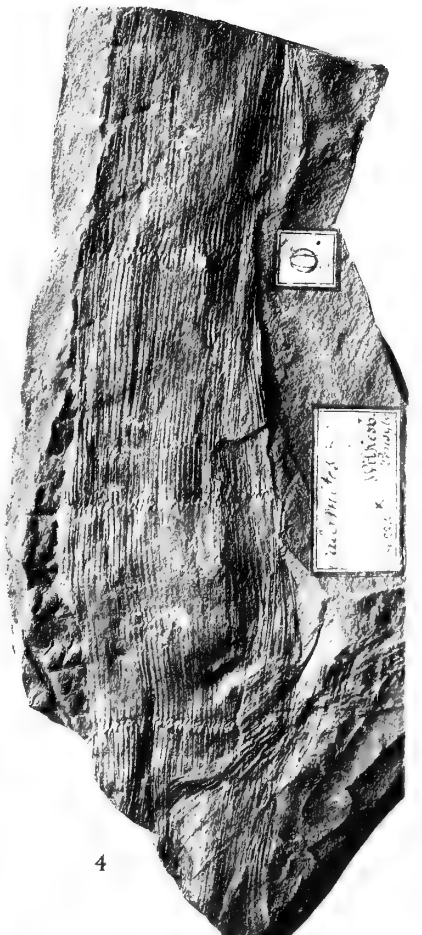
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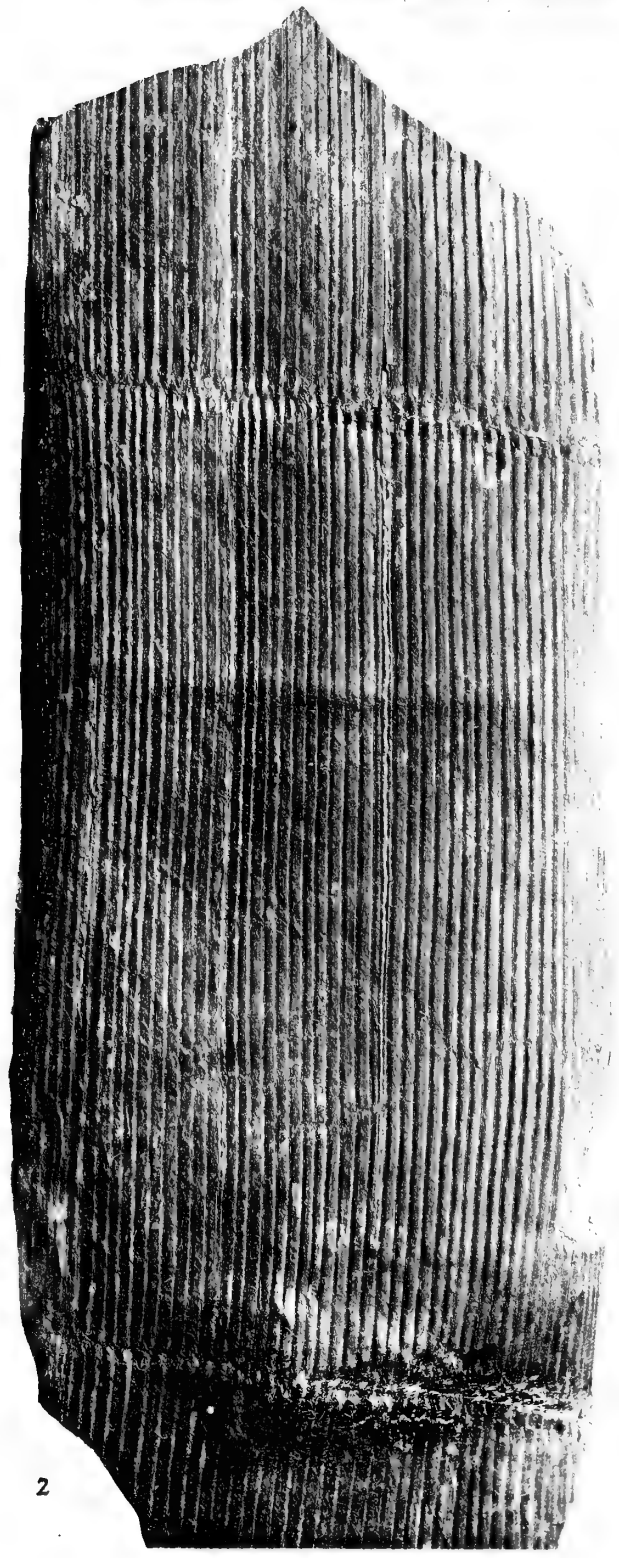
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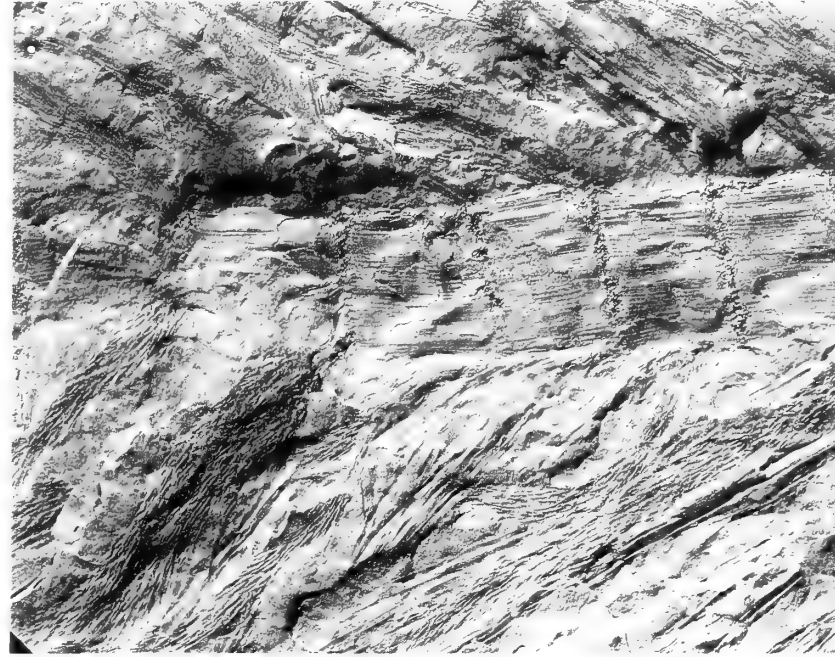
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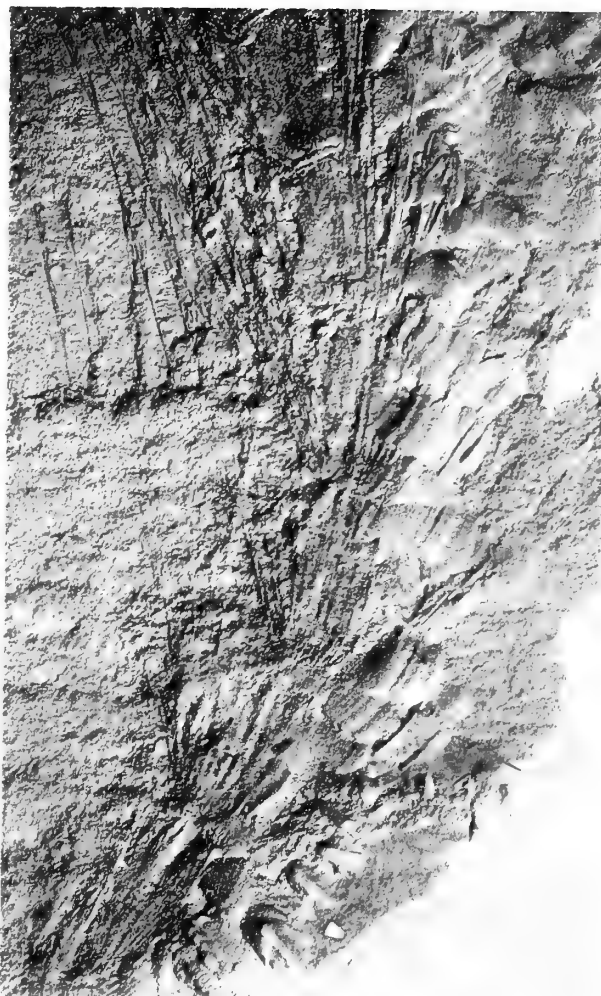








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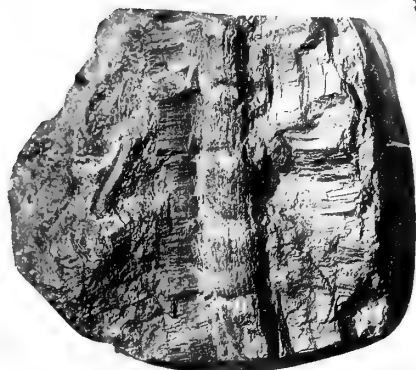
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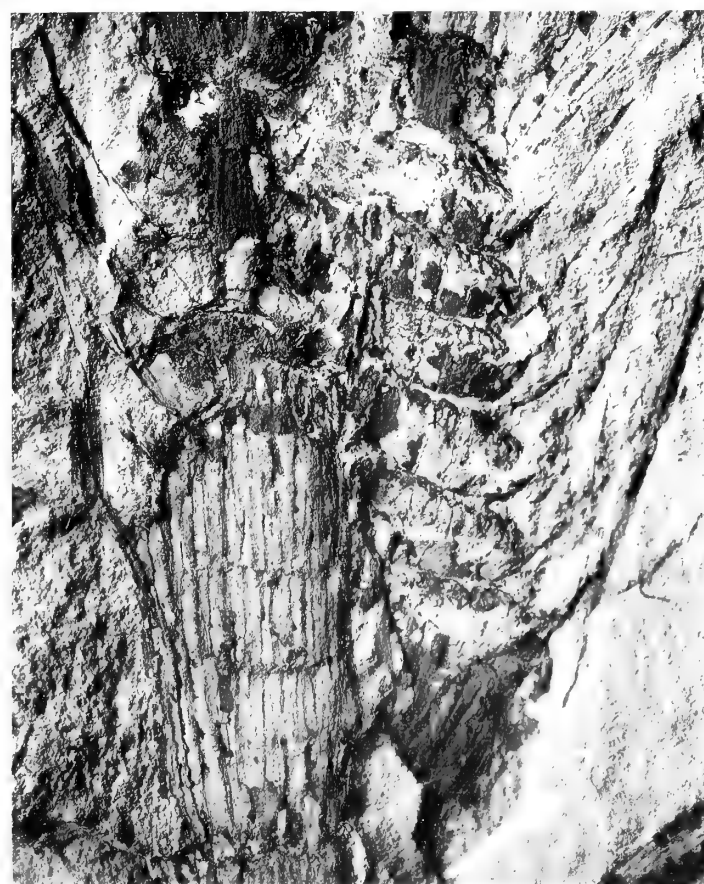
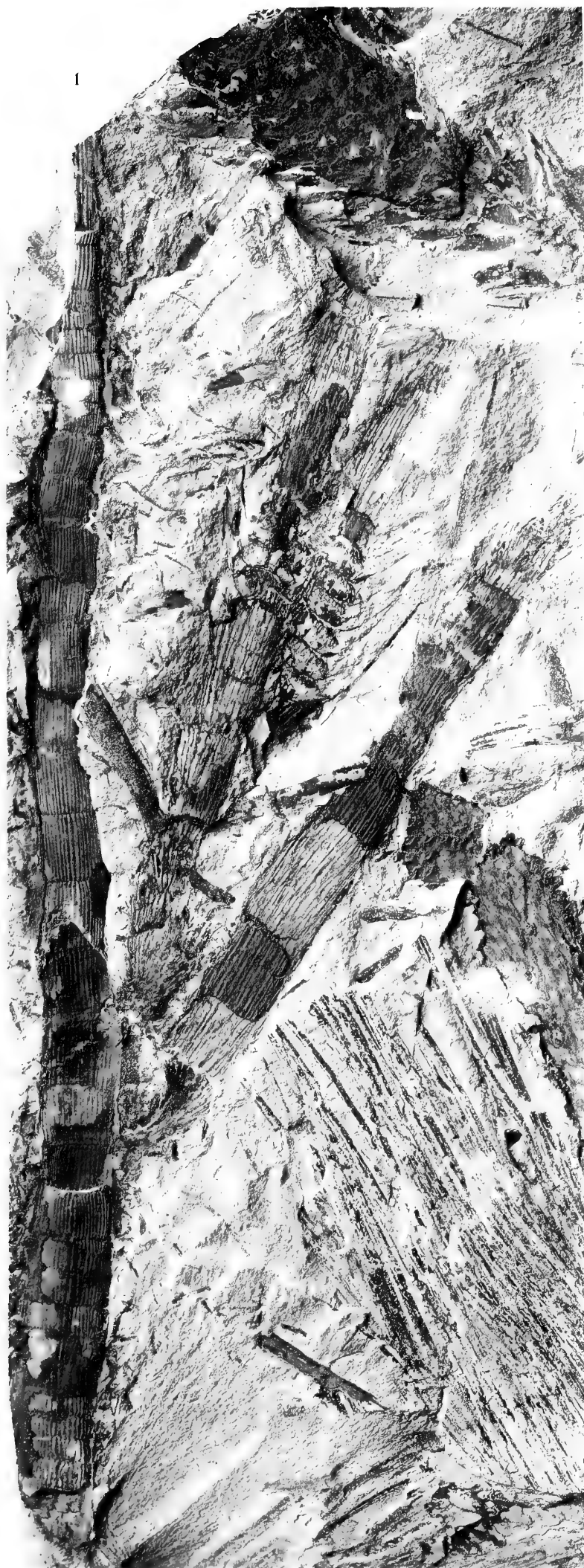


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*C. speciosa*  
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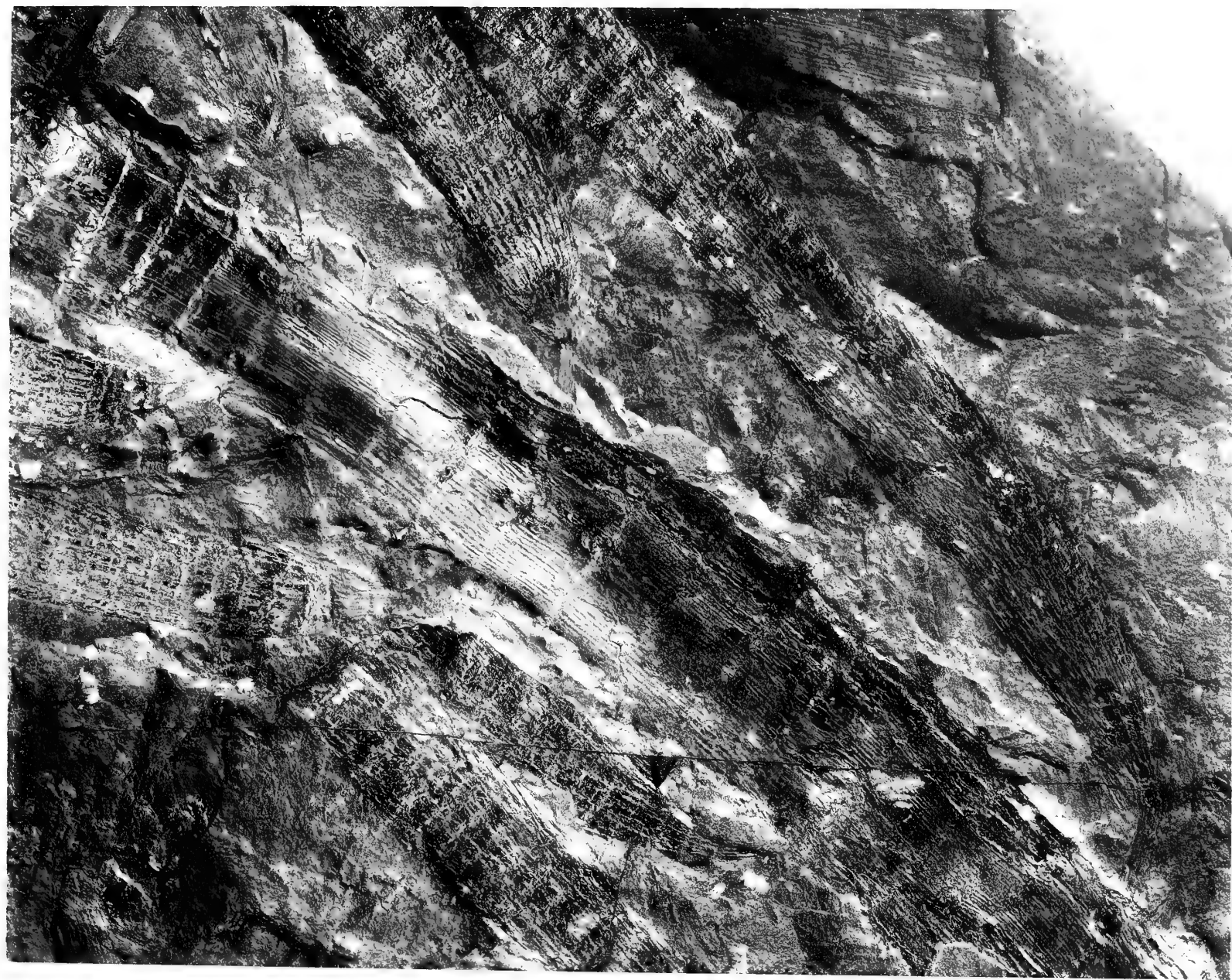
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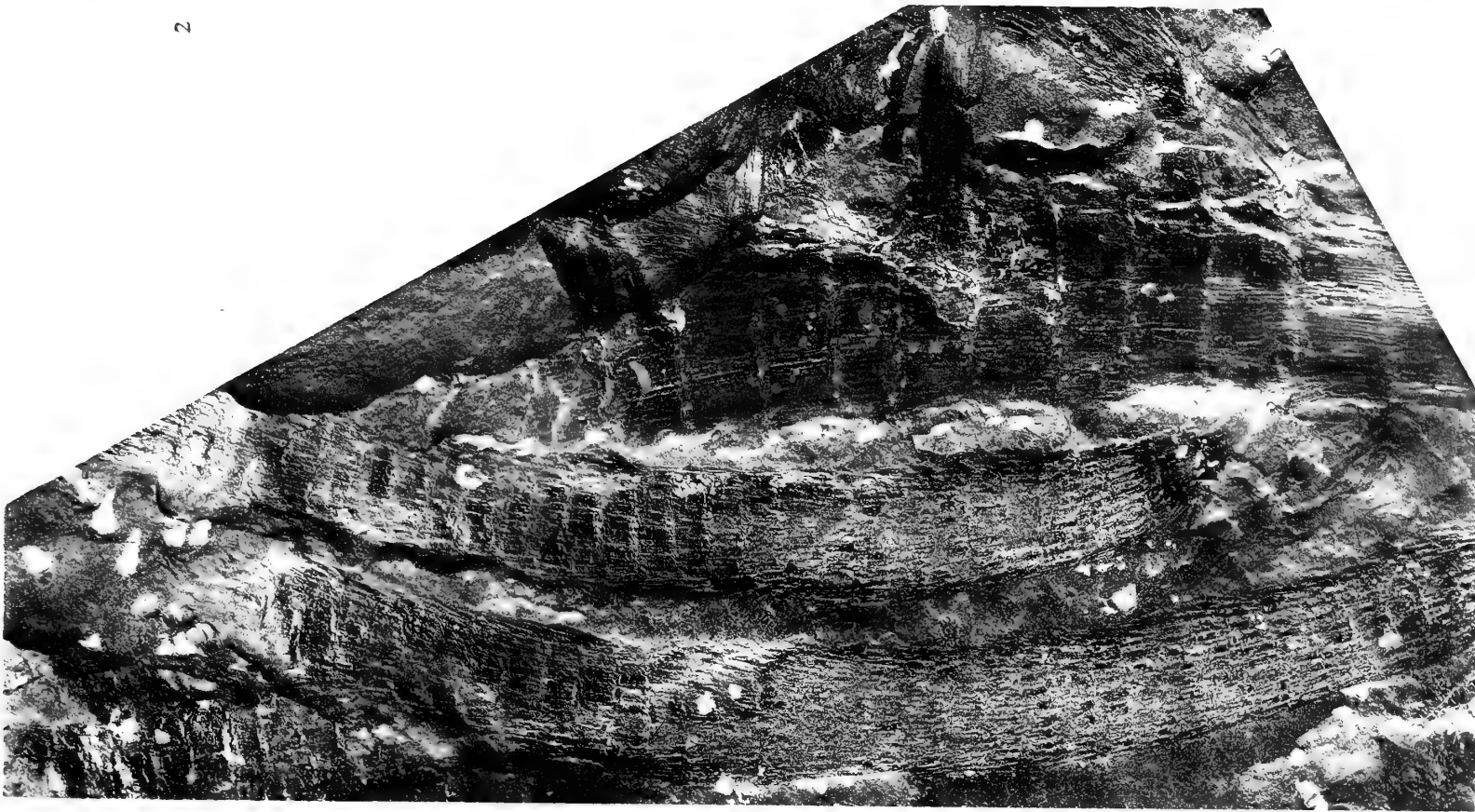
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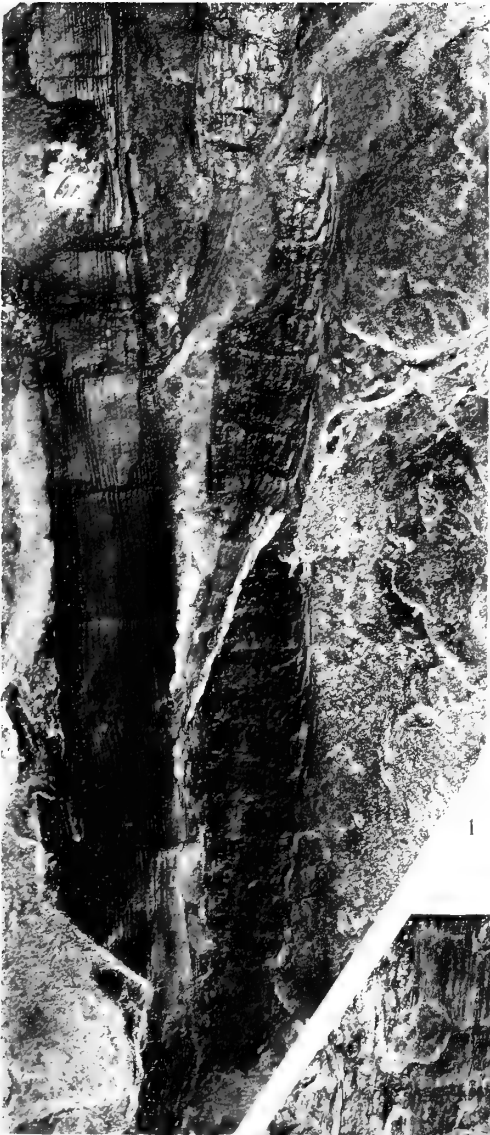


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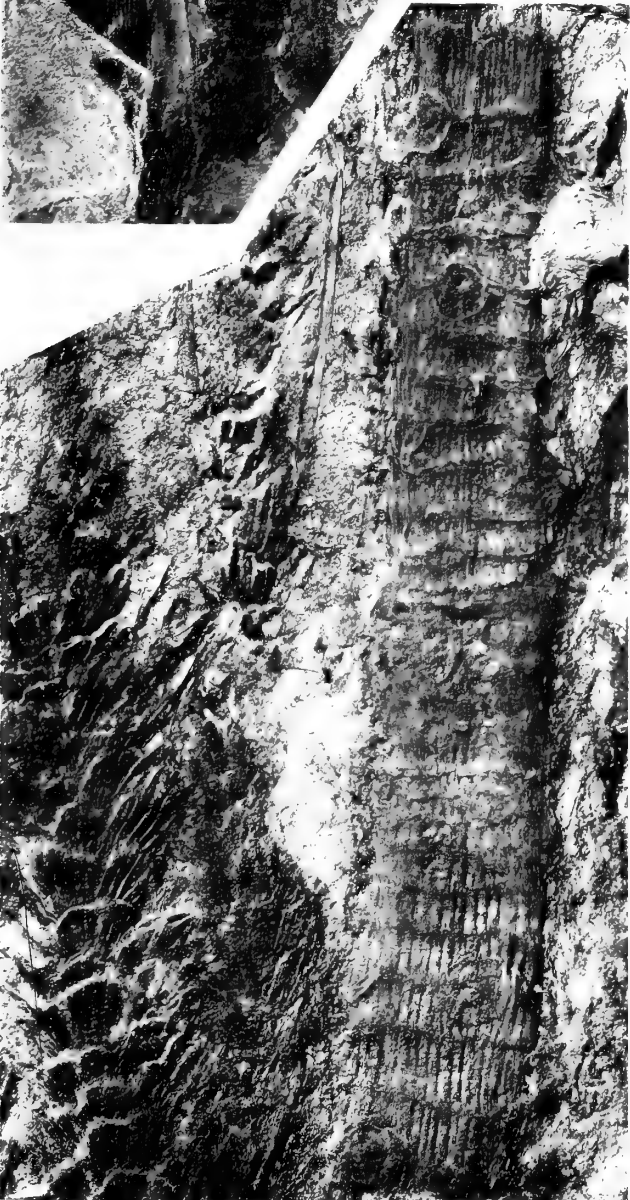
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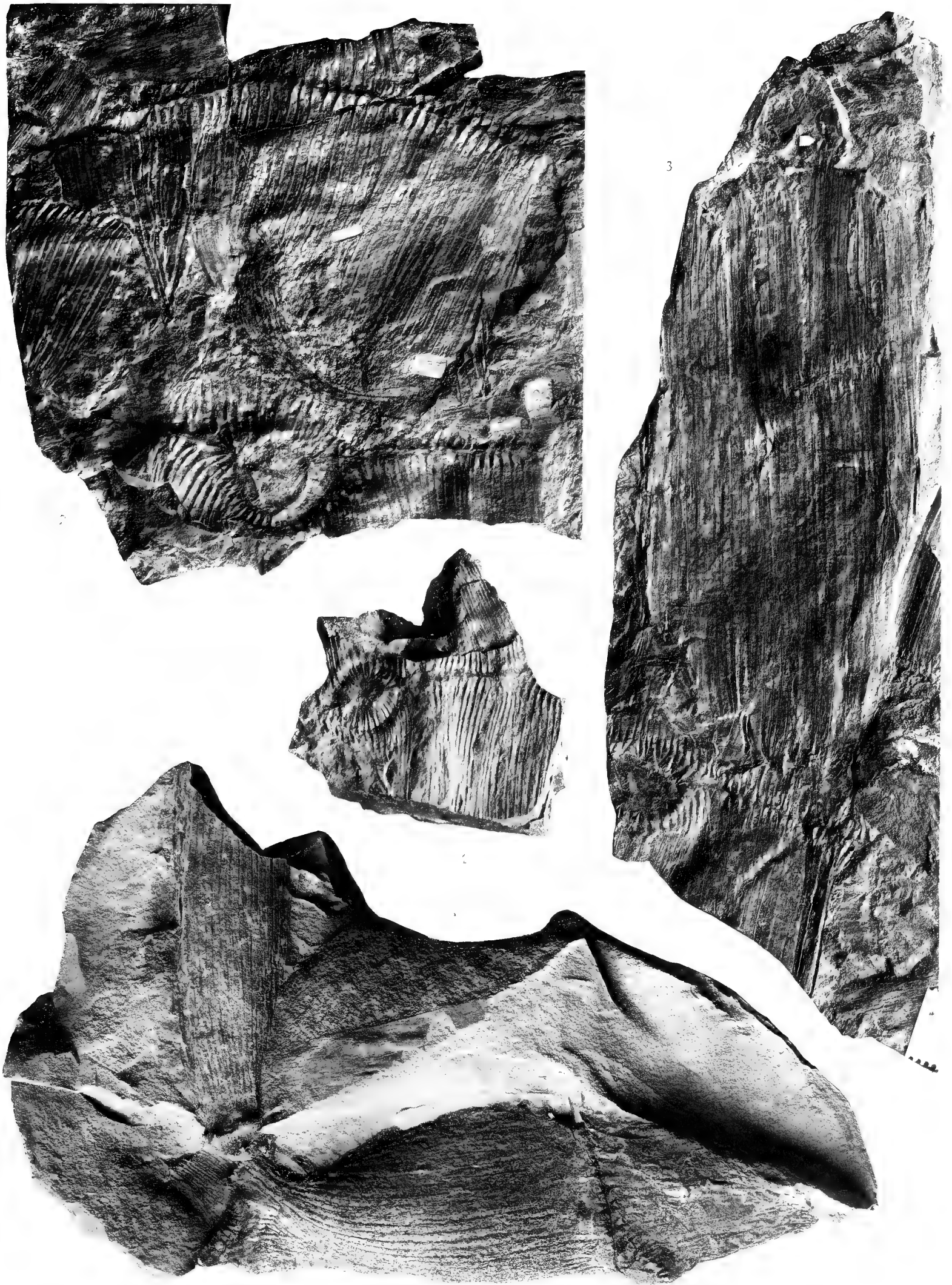


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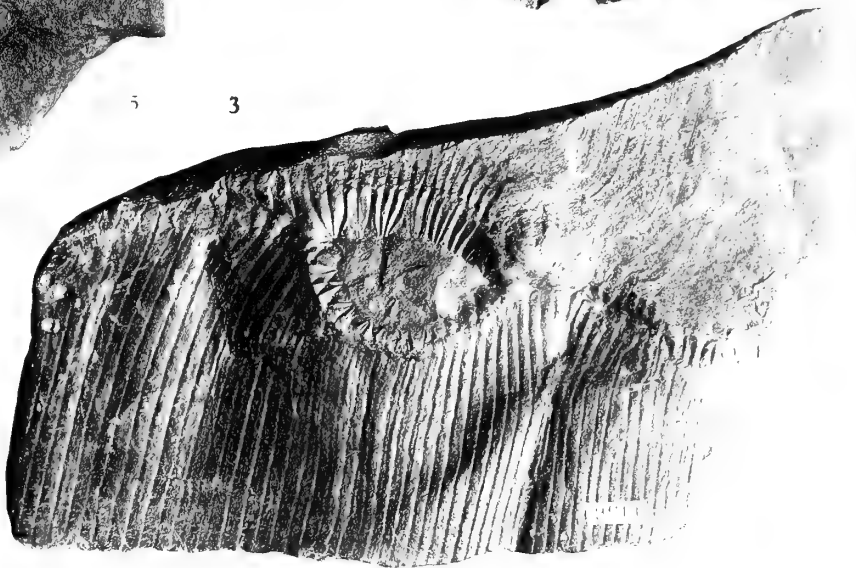
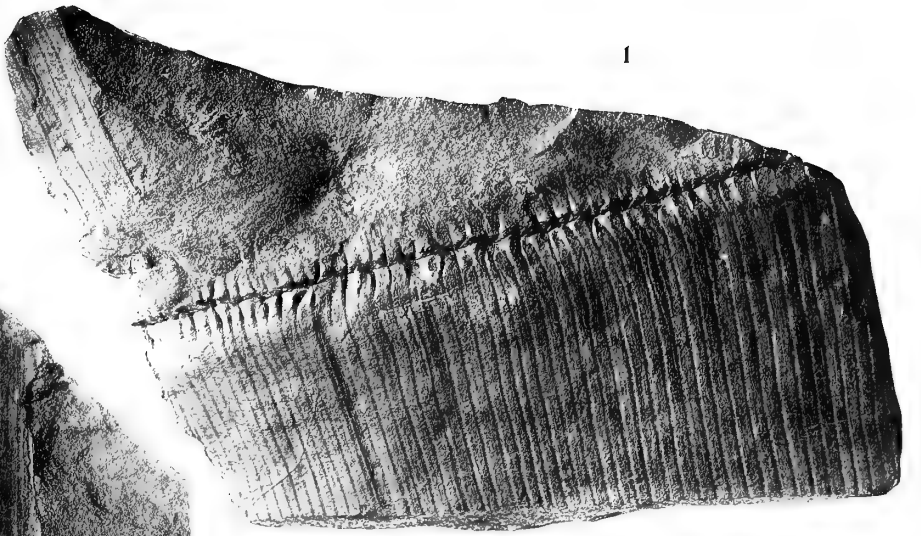
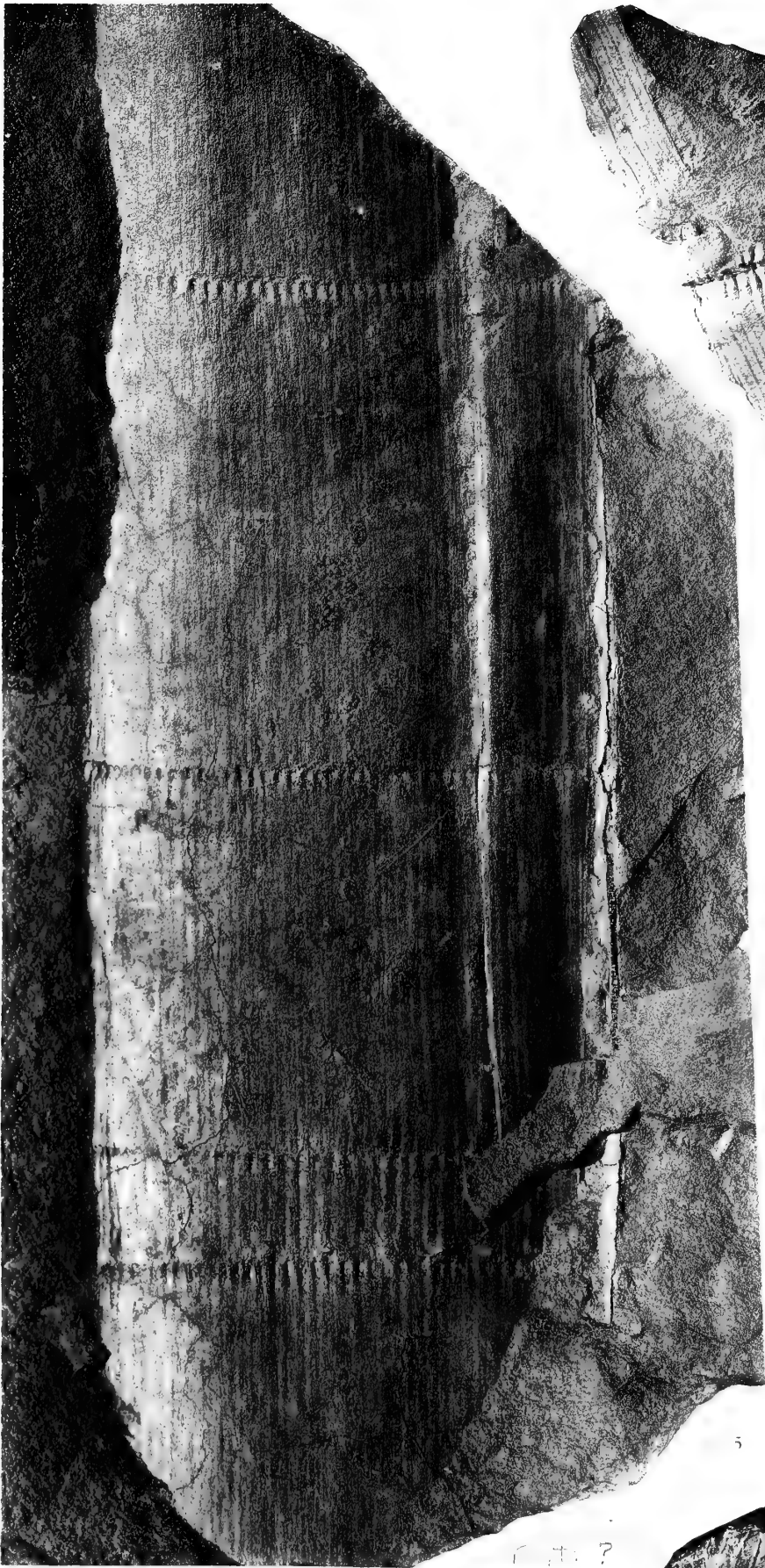
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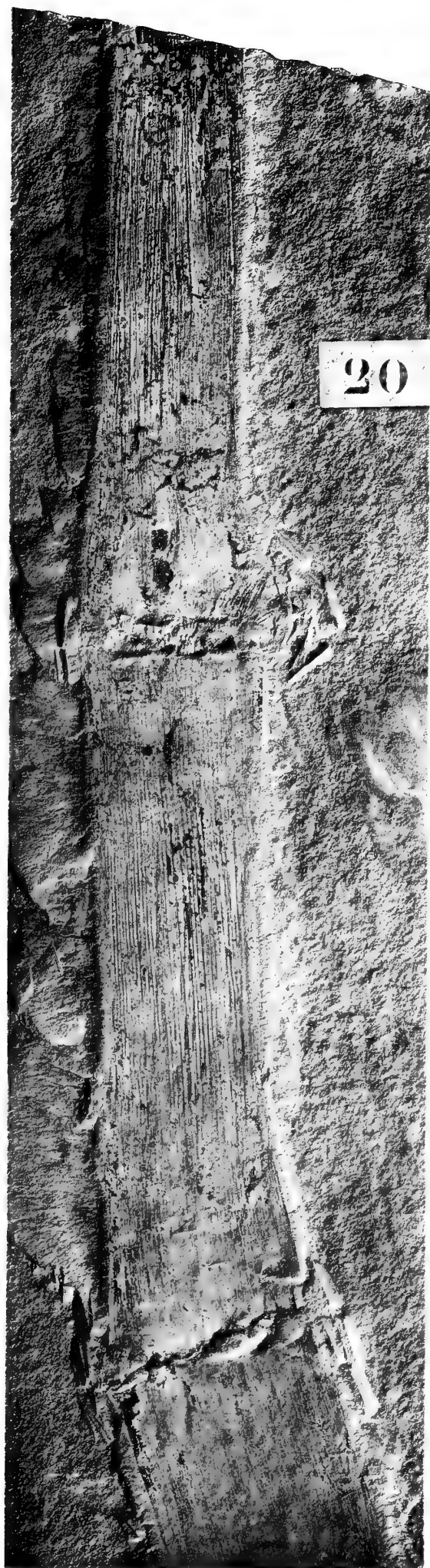








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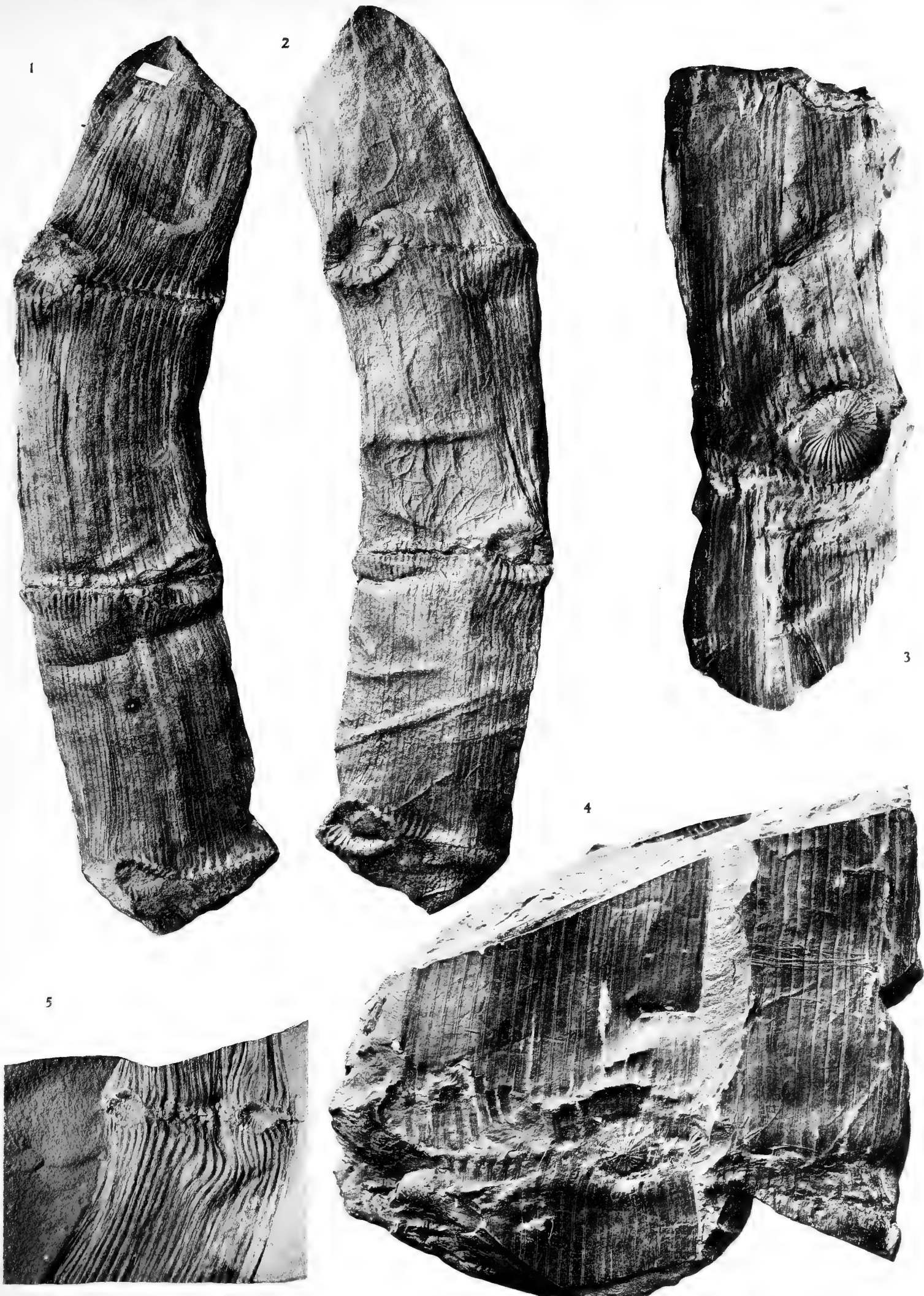


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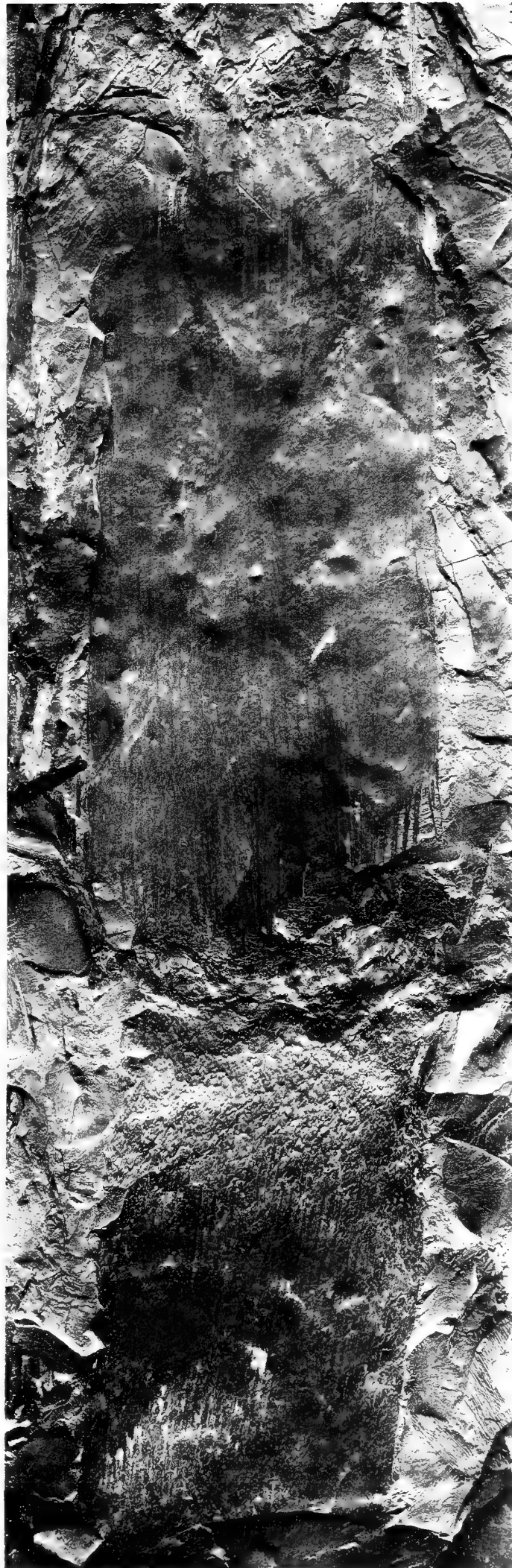
















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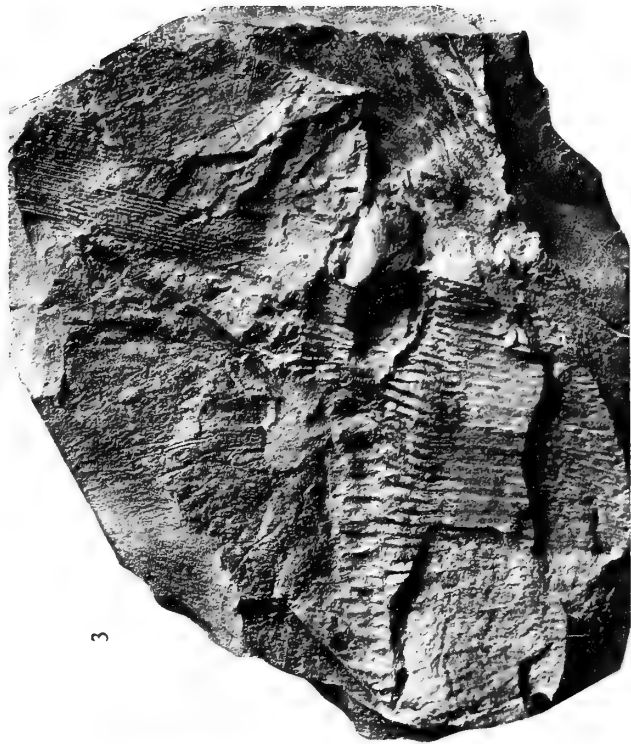
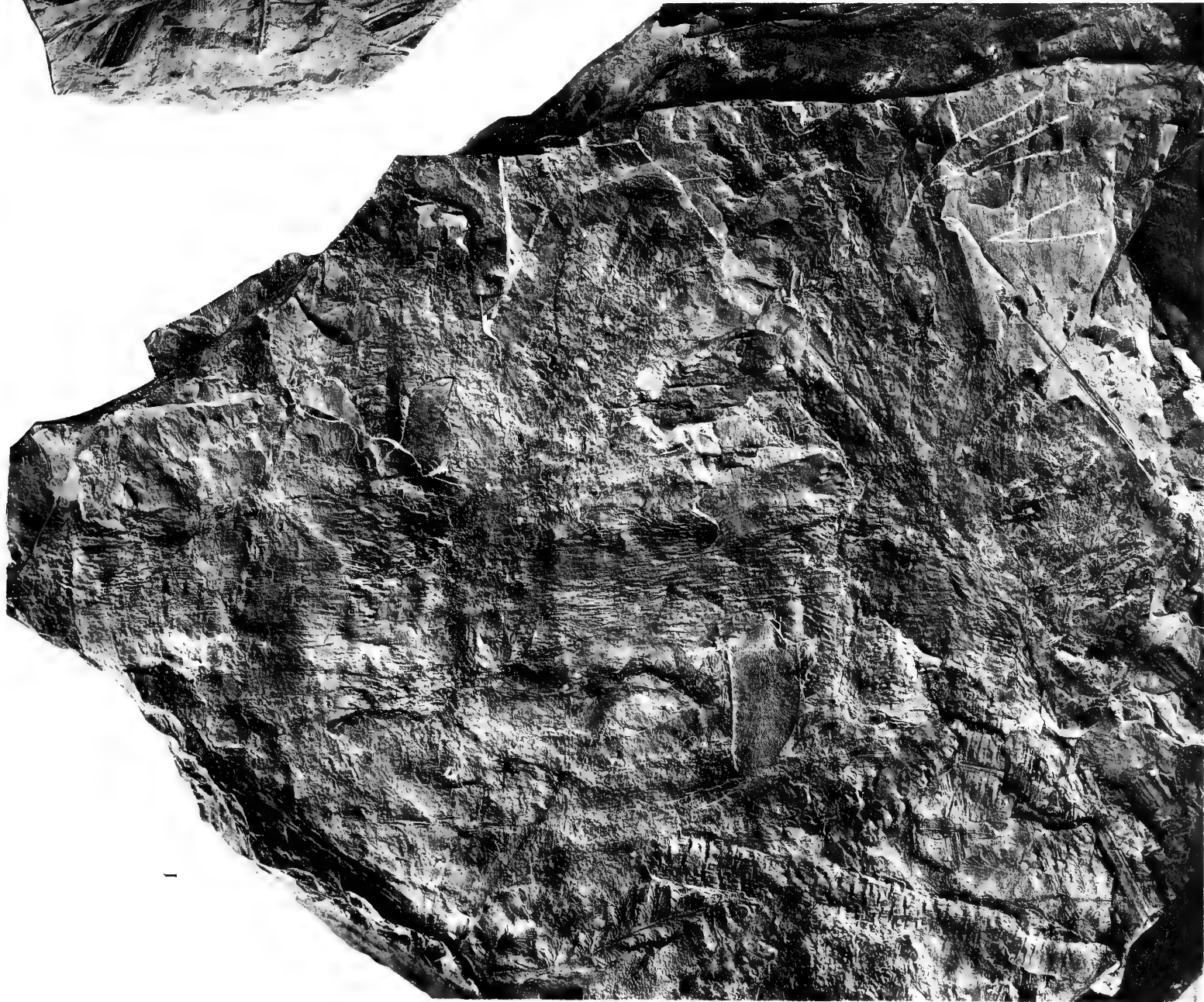


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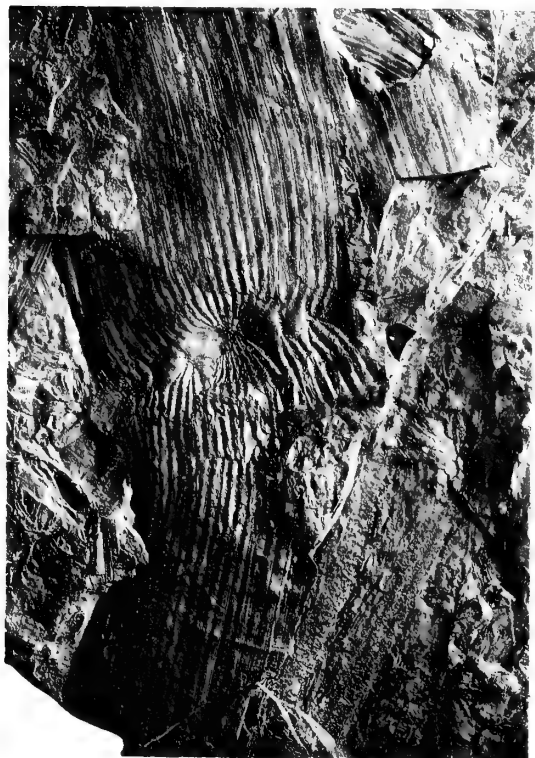
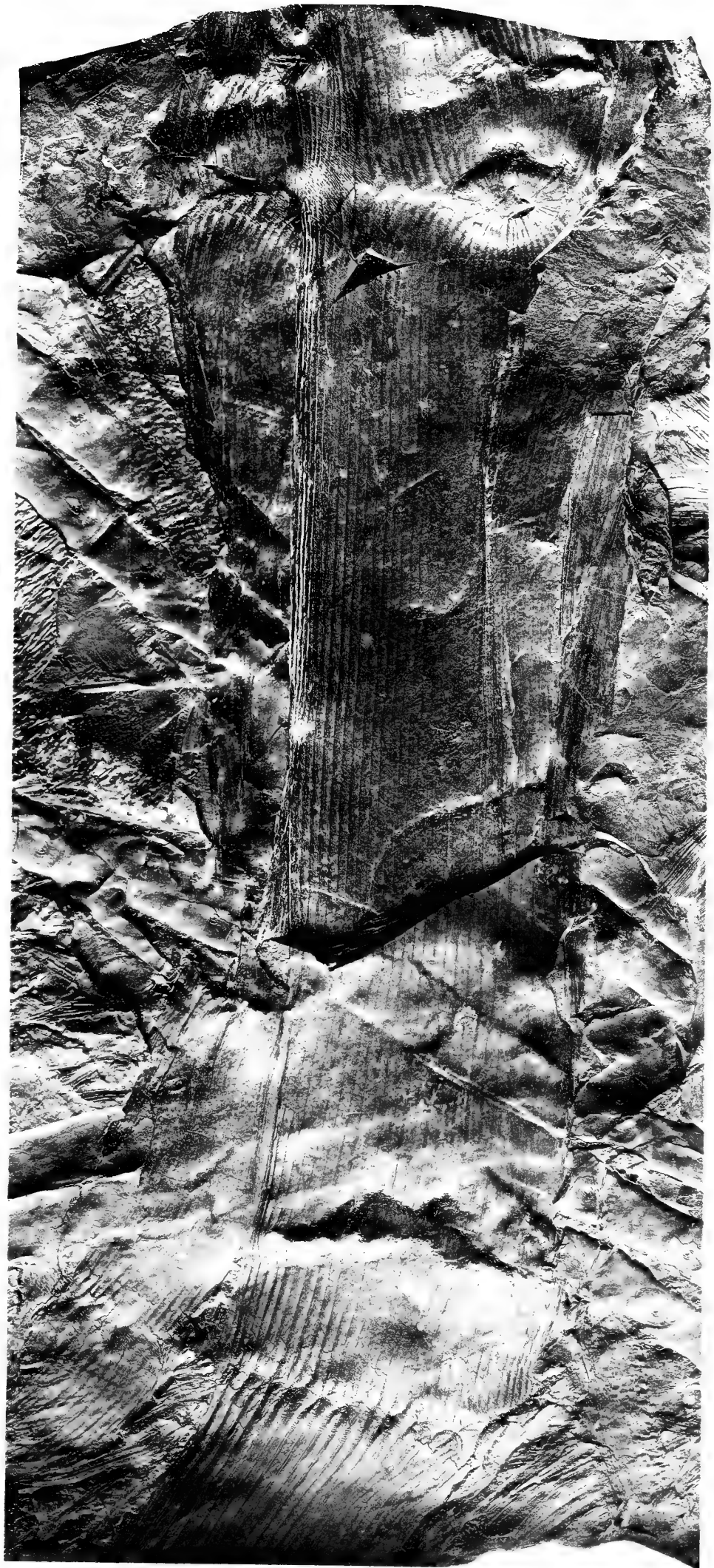






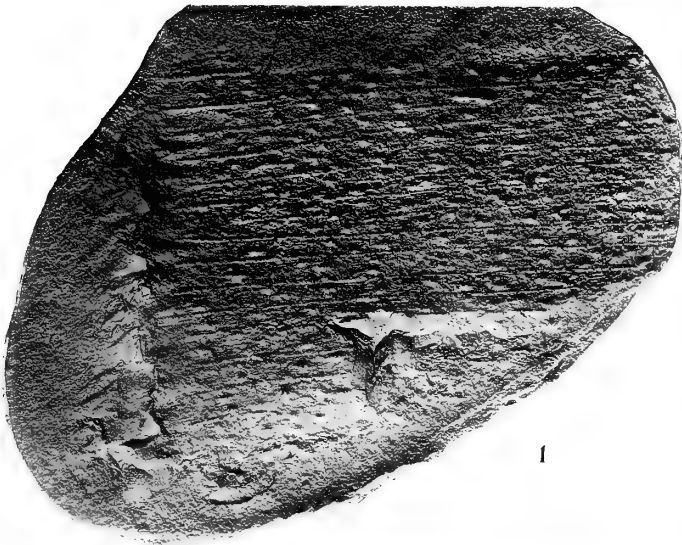








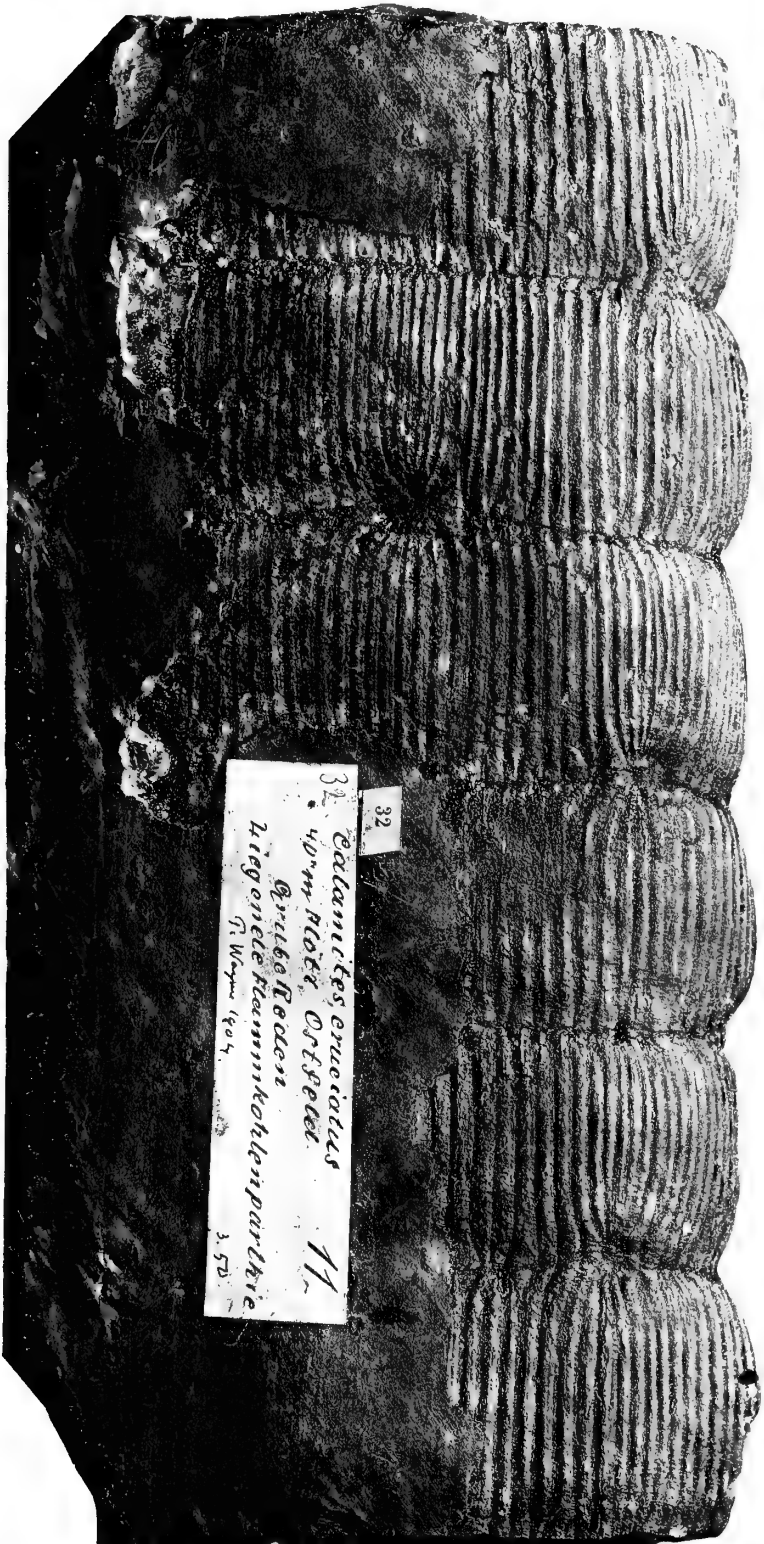




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Grieco-Roman  
Niederrhein  
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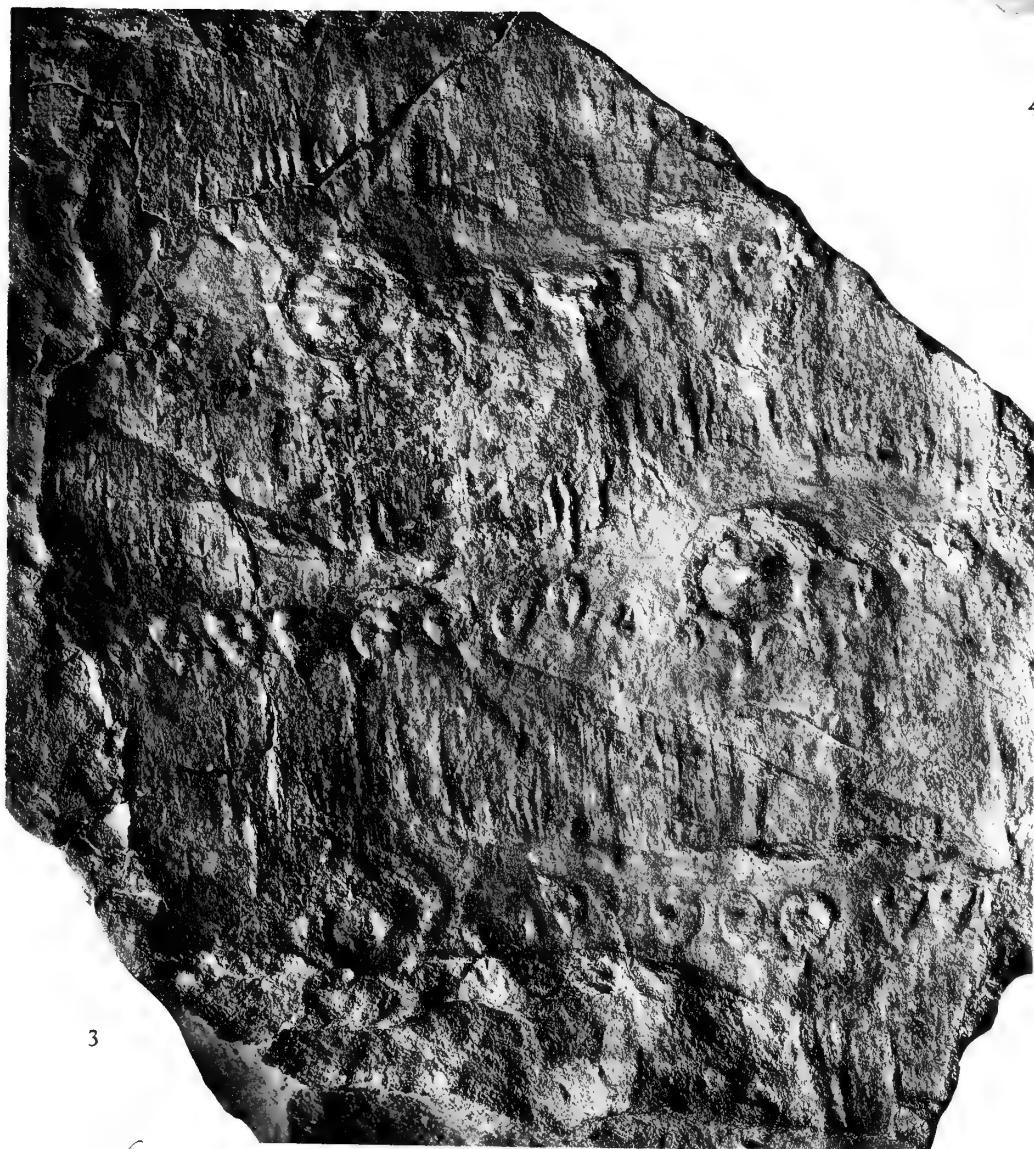
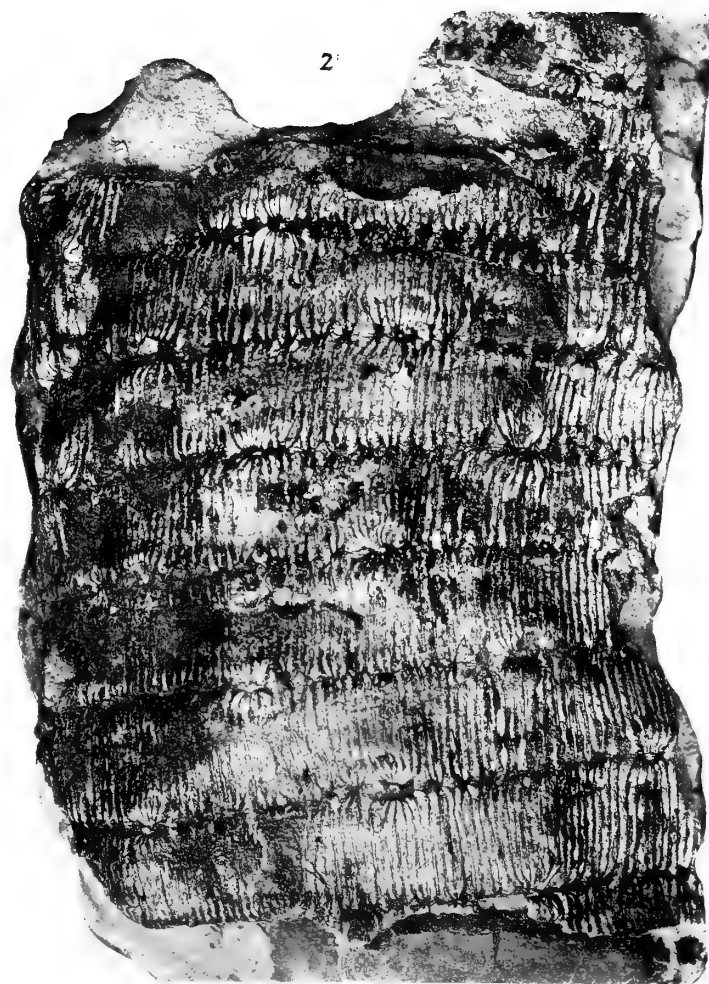
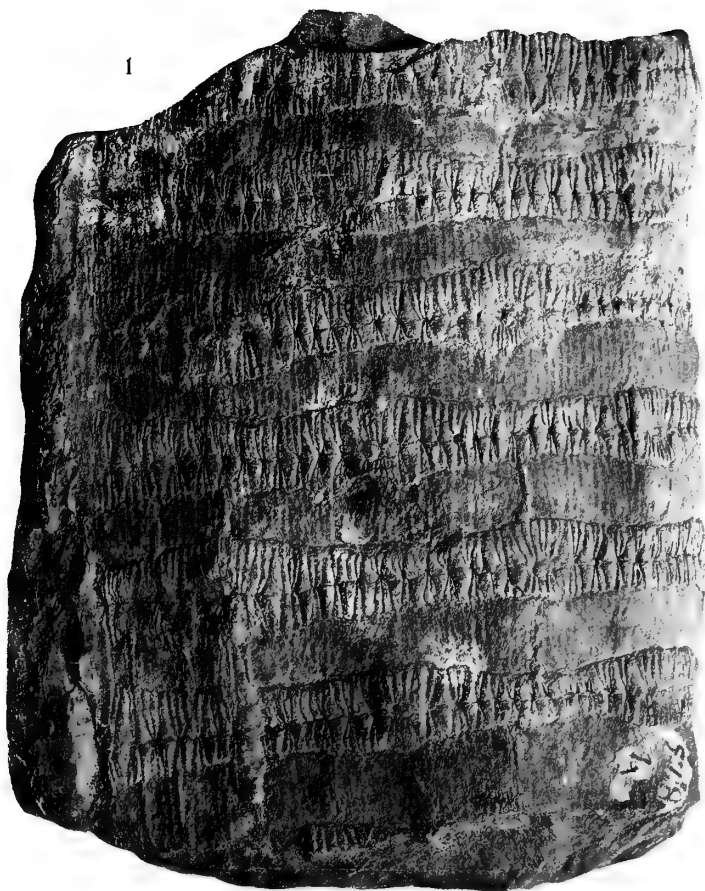


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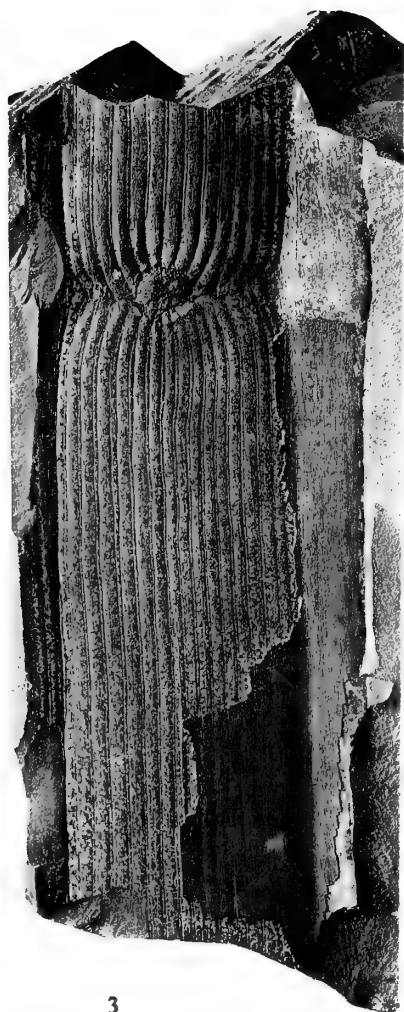
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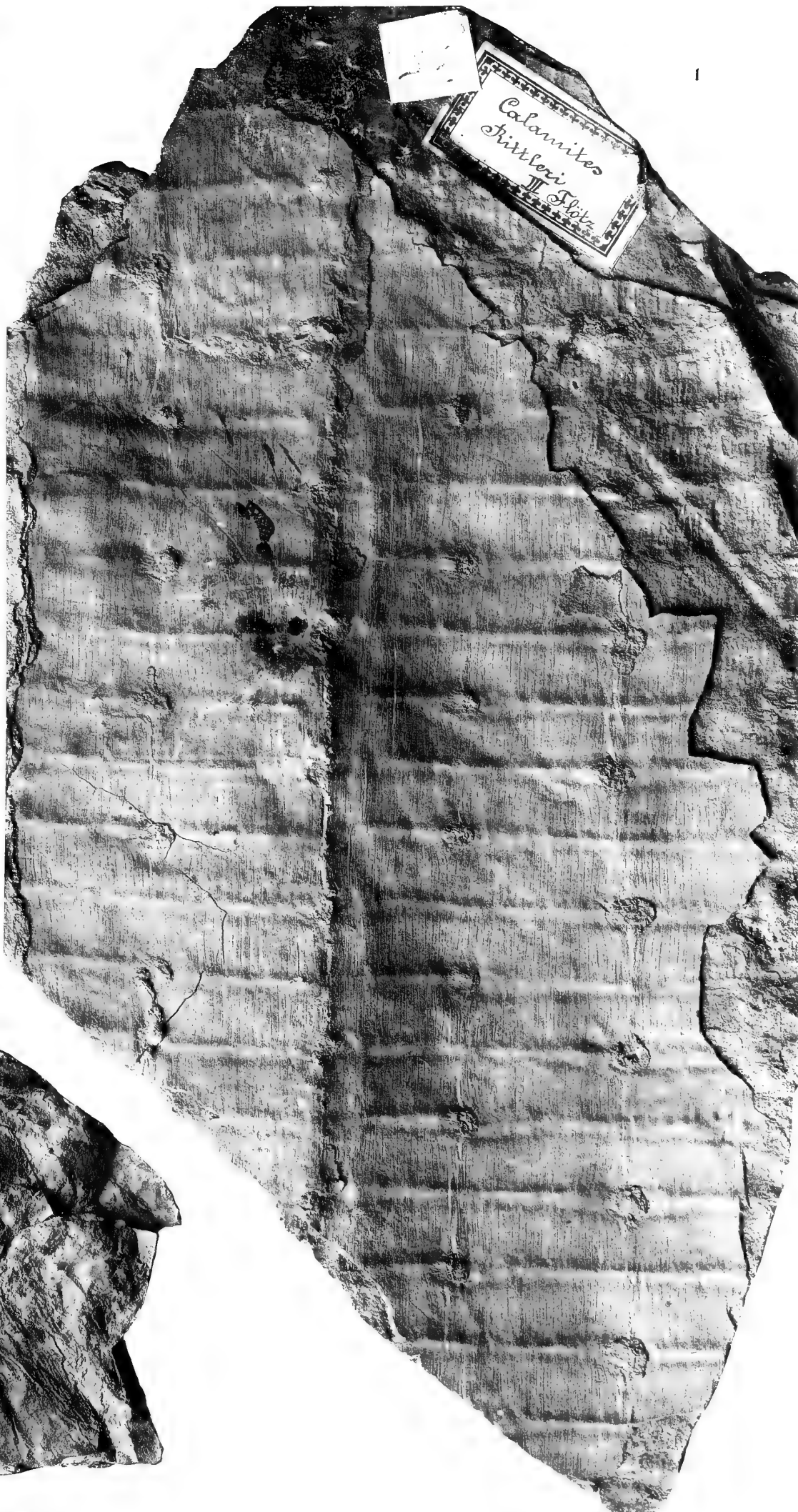
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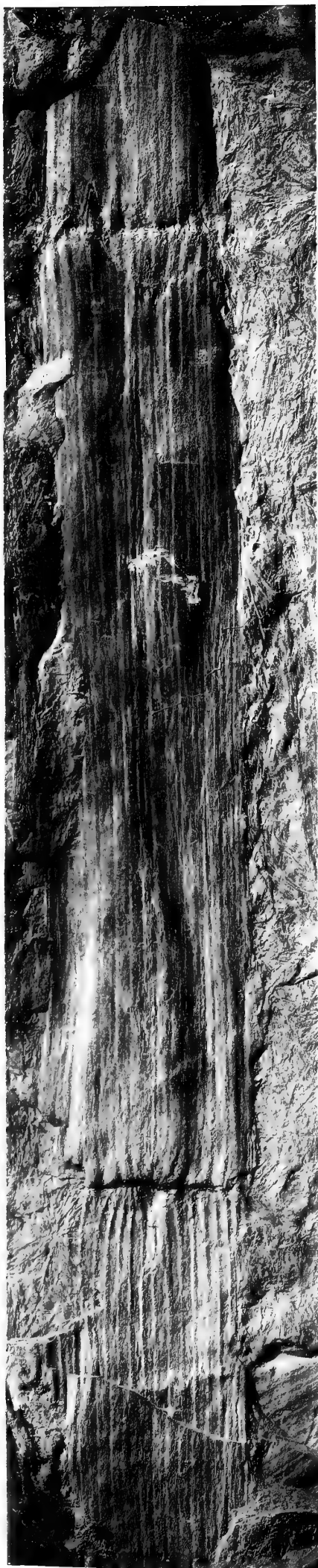


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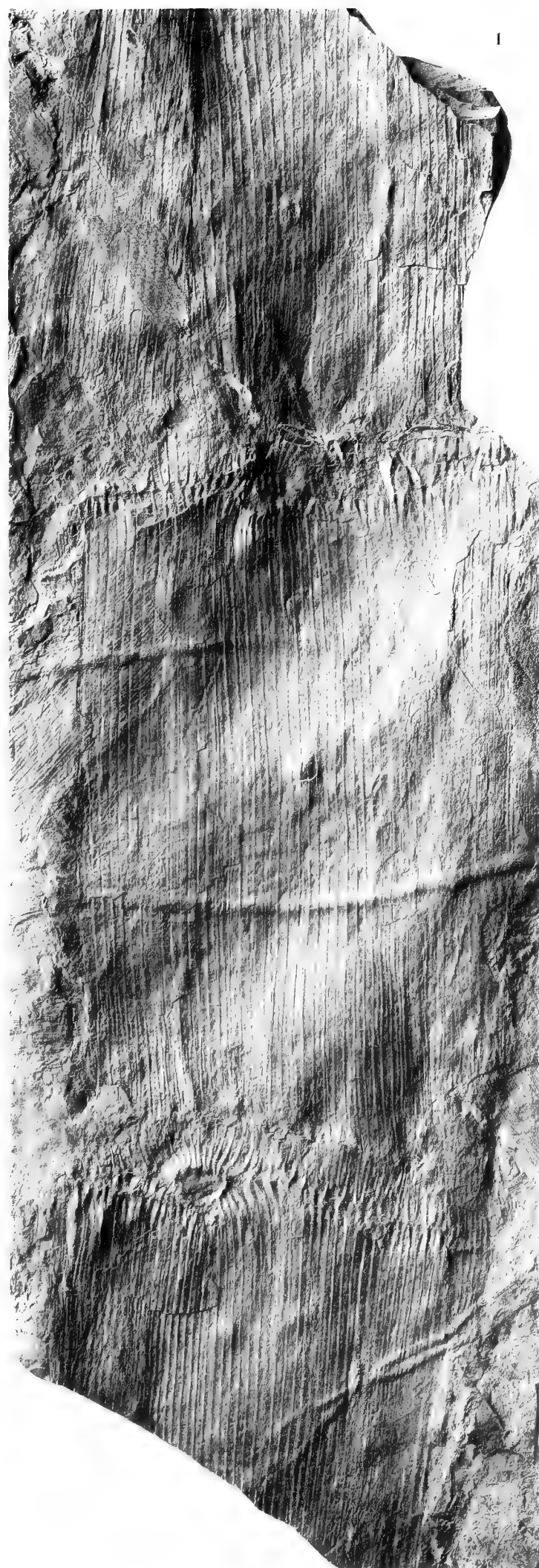
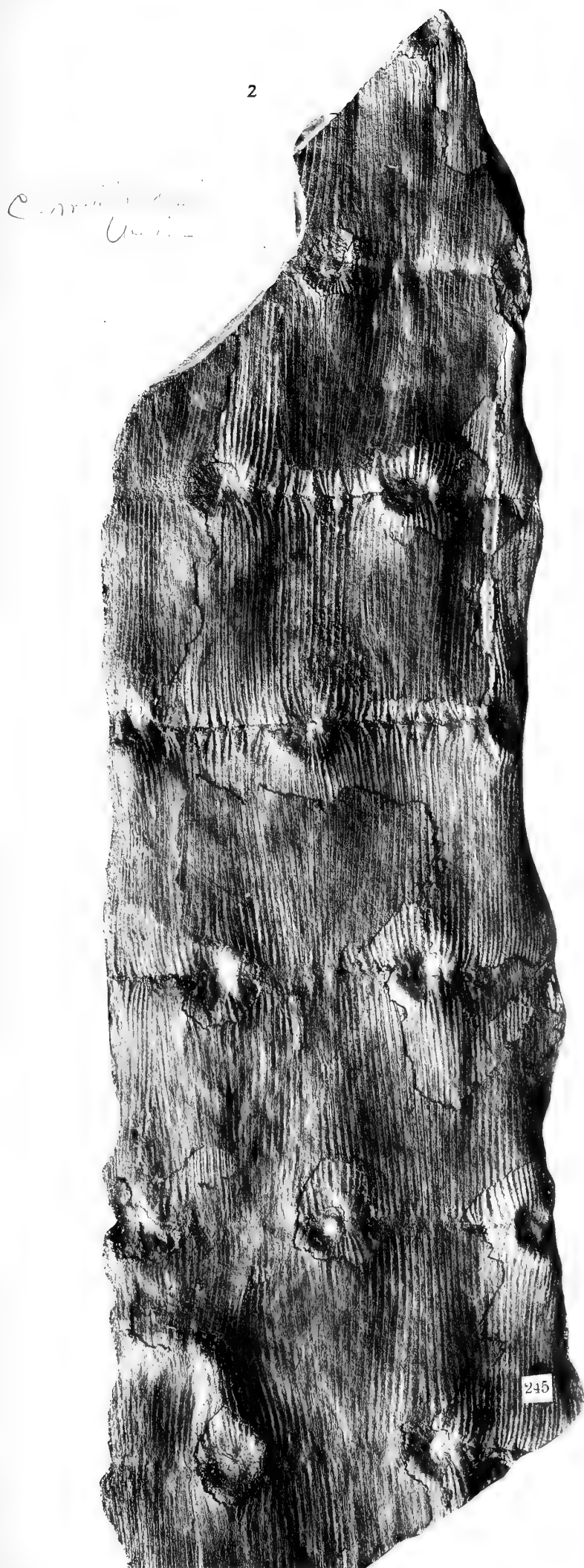


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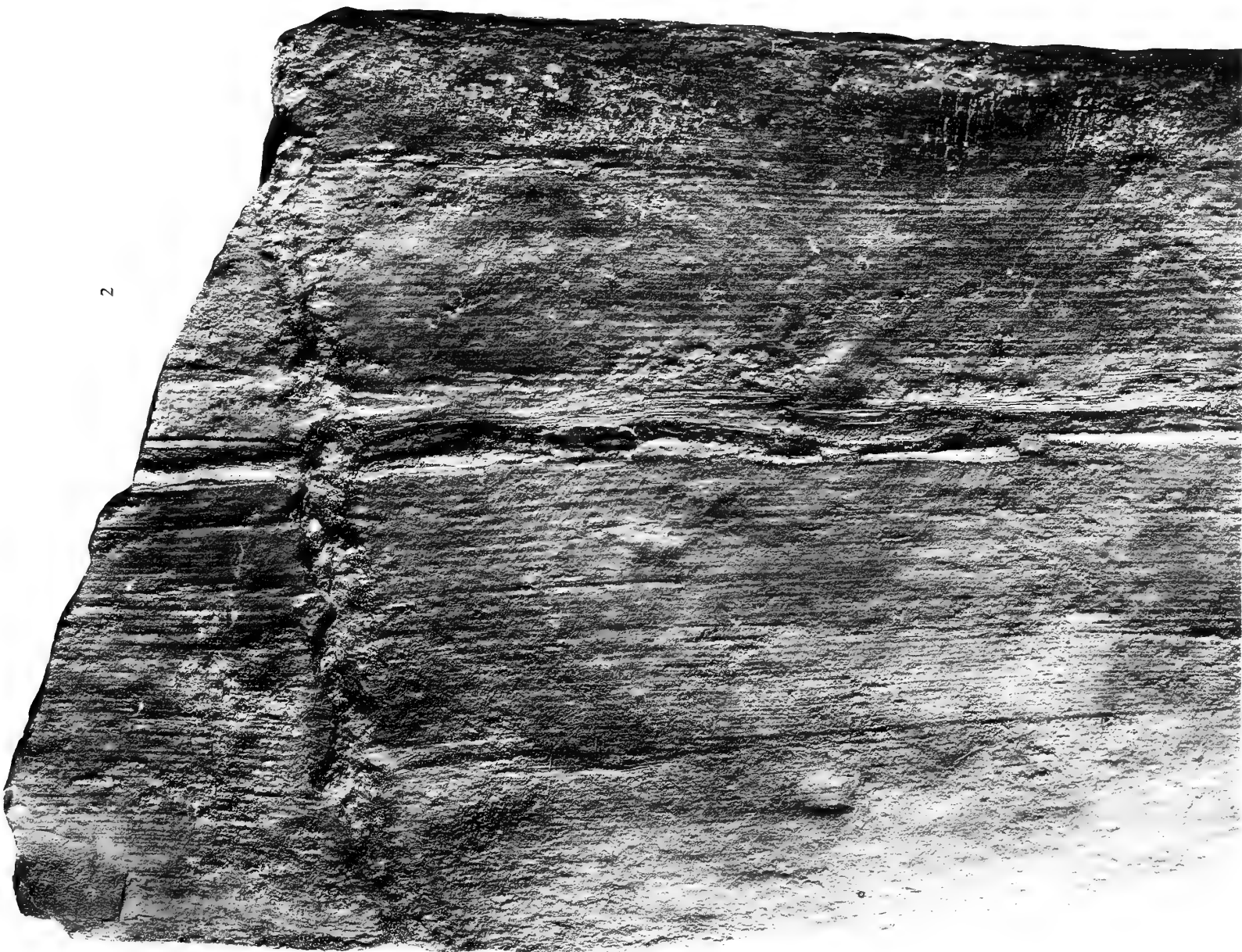




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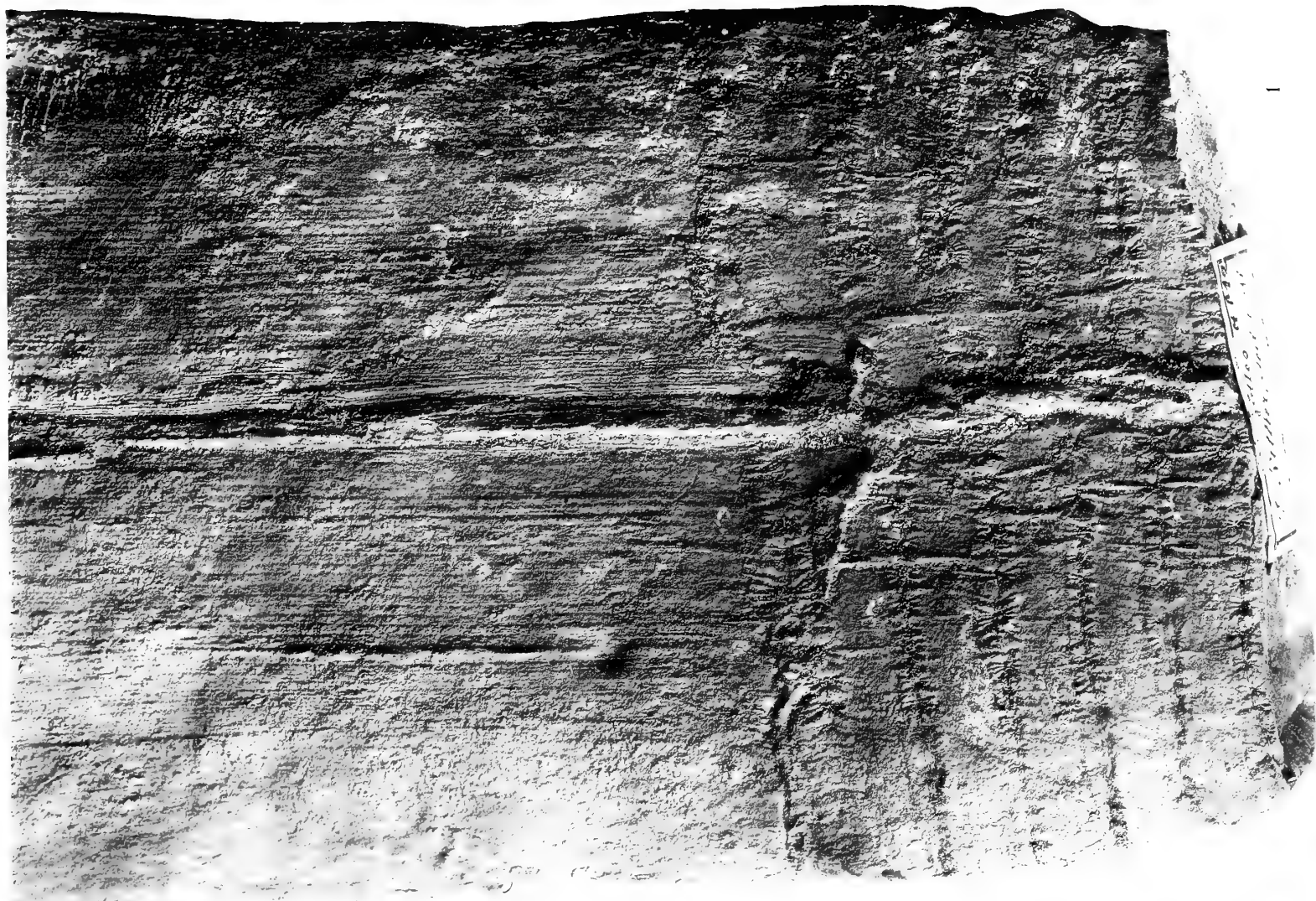


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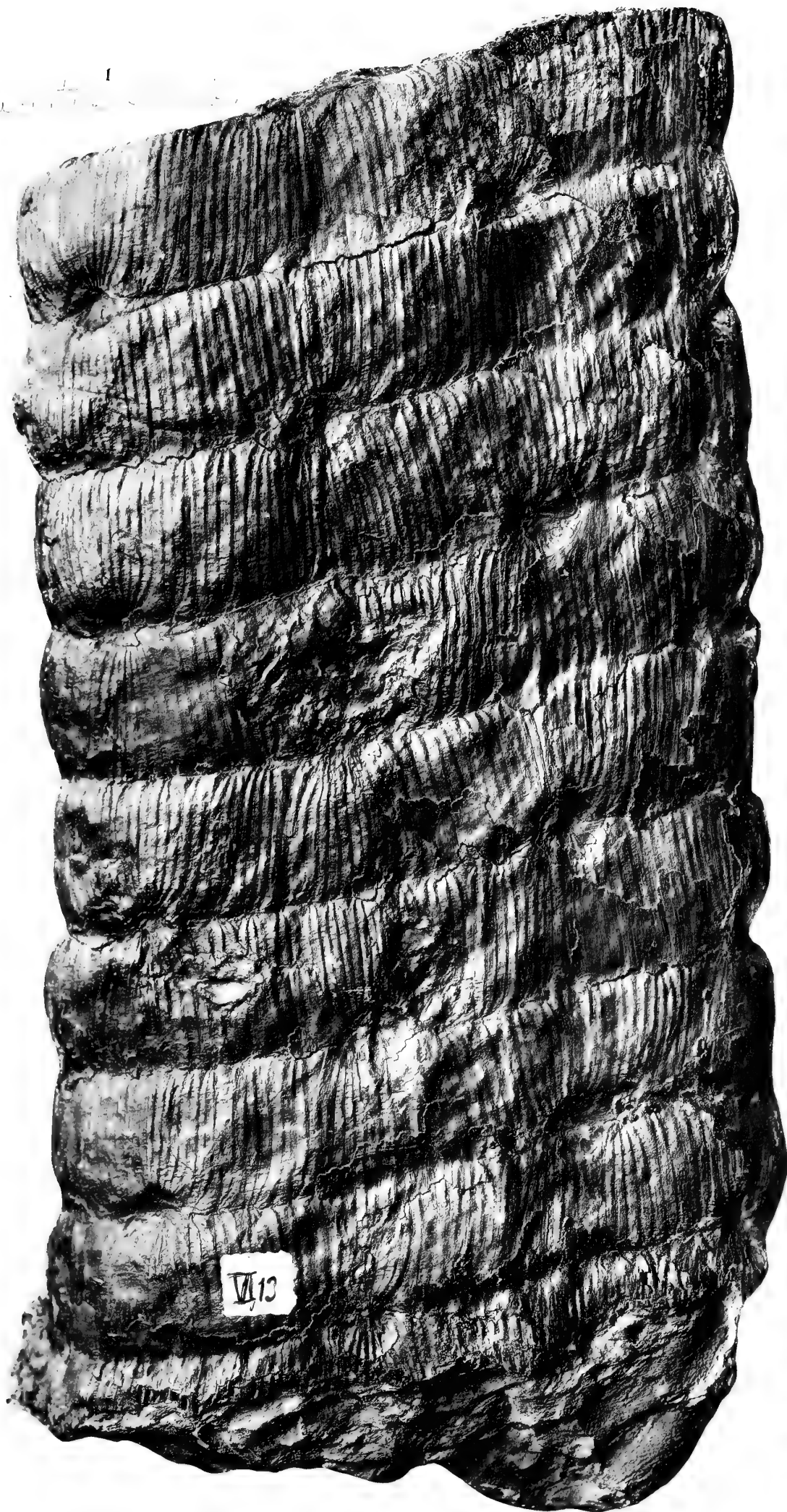


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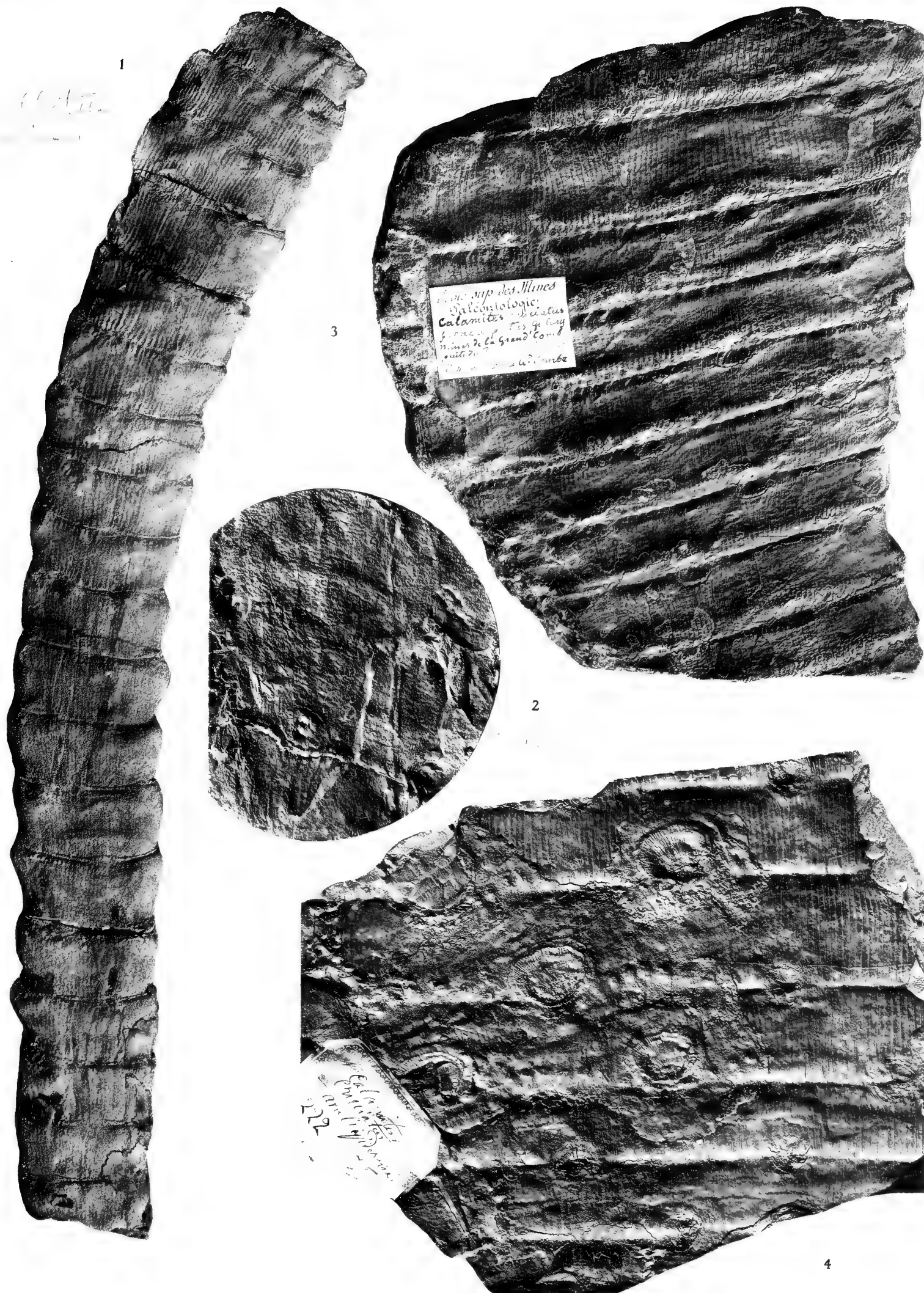
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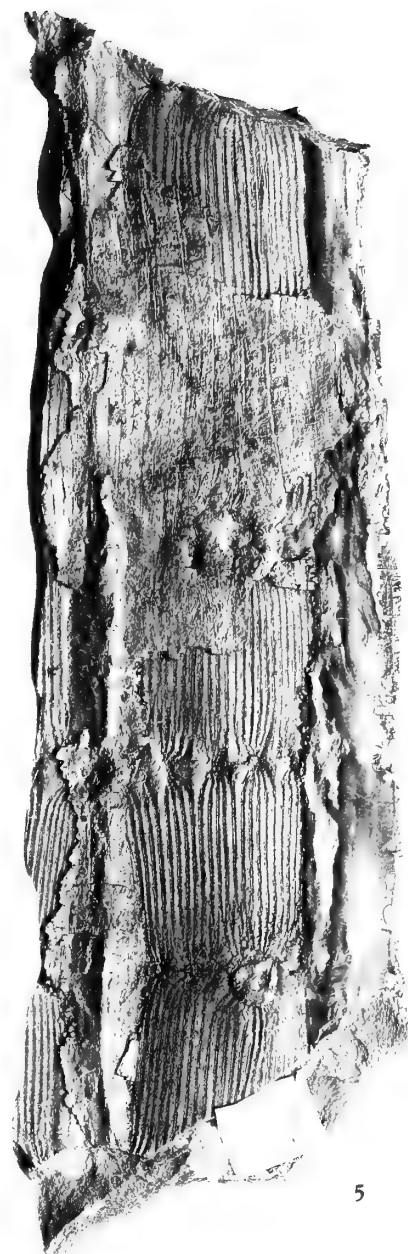
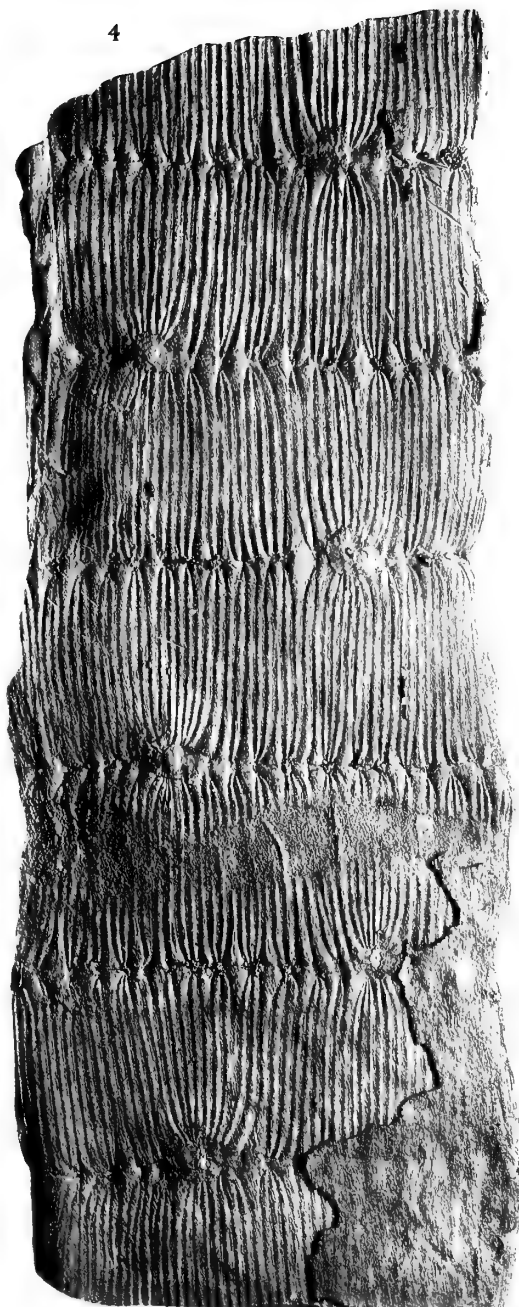
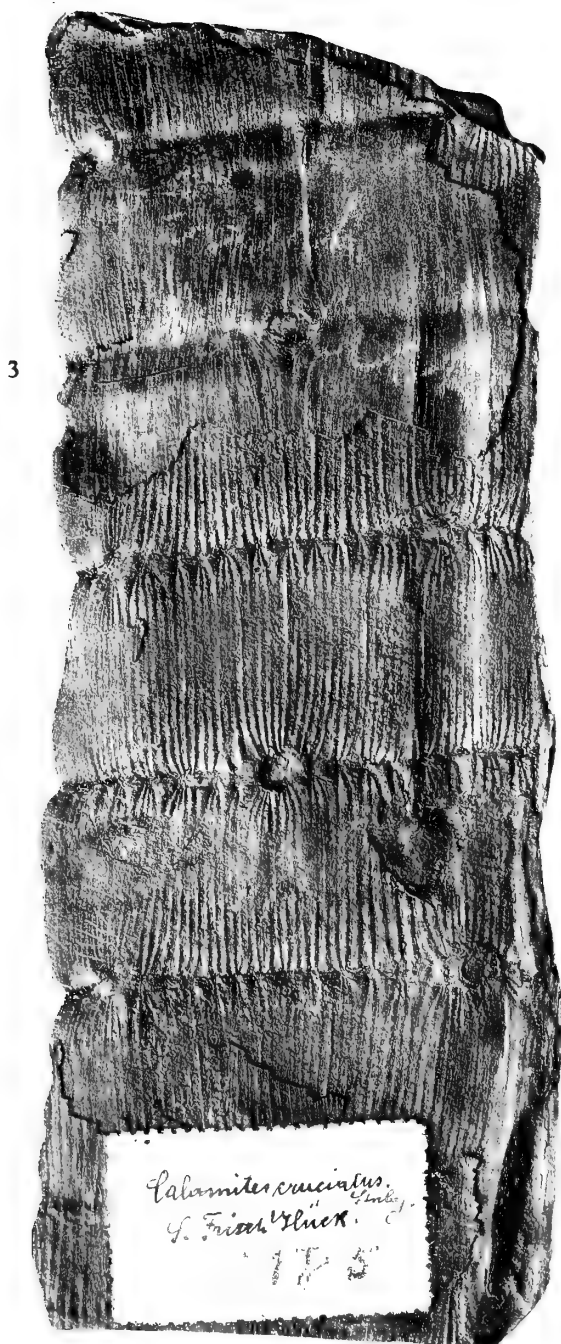
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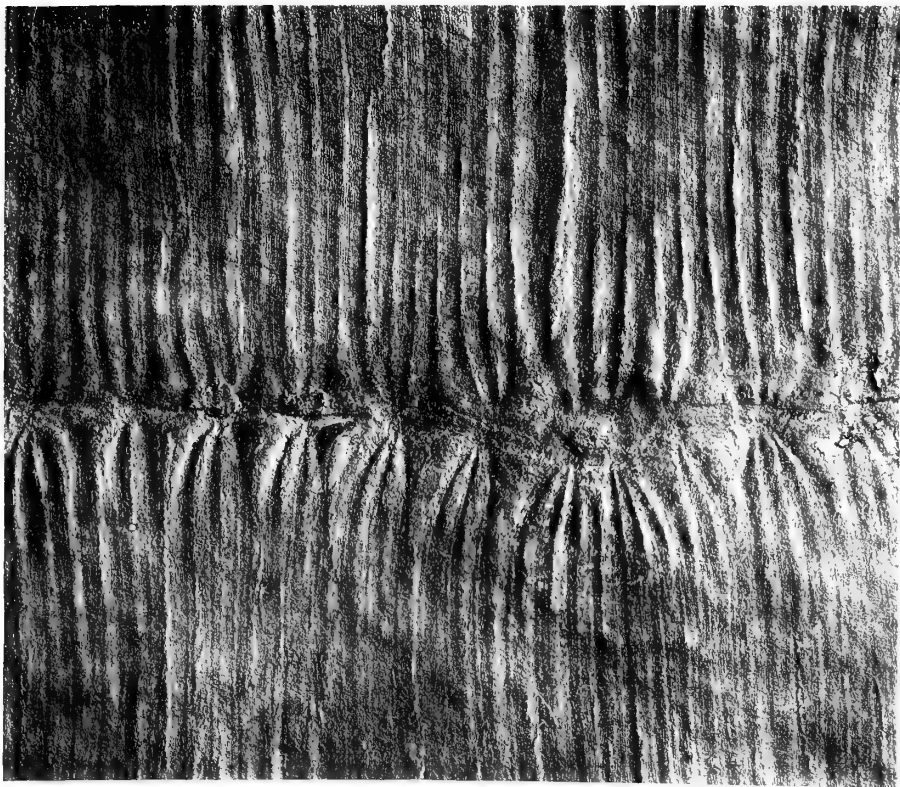




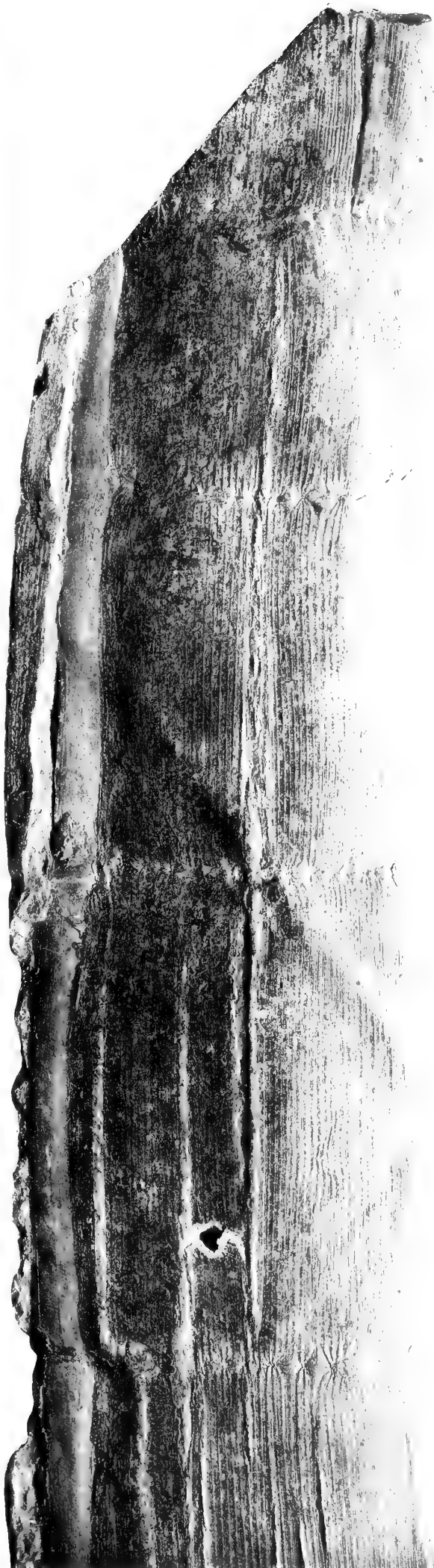




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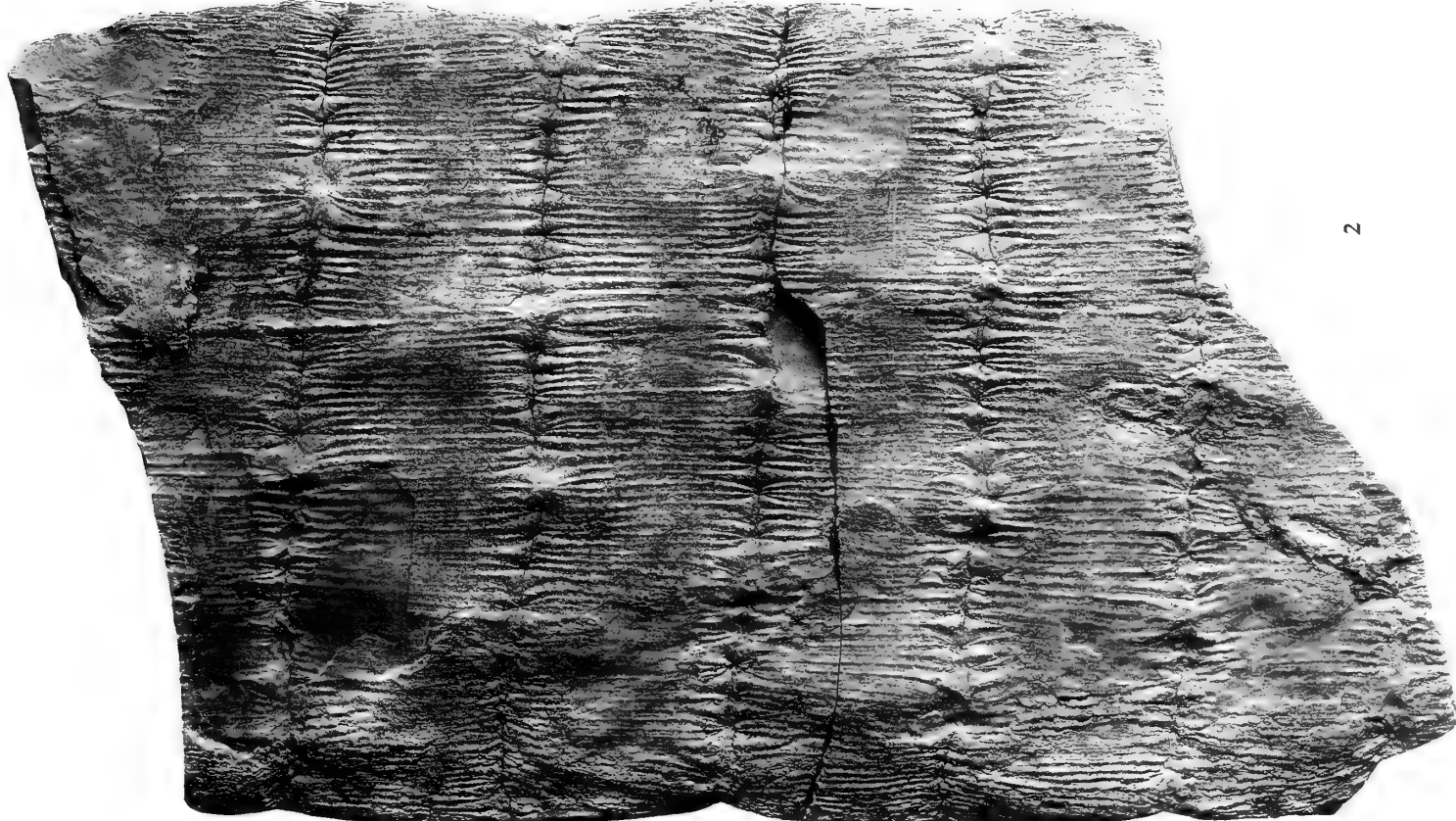
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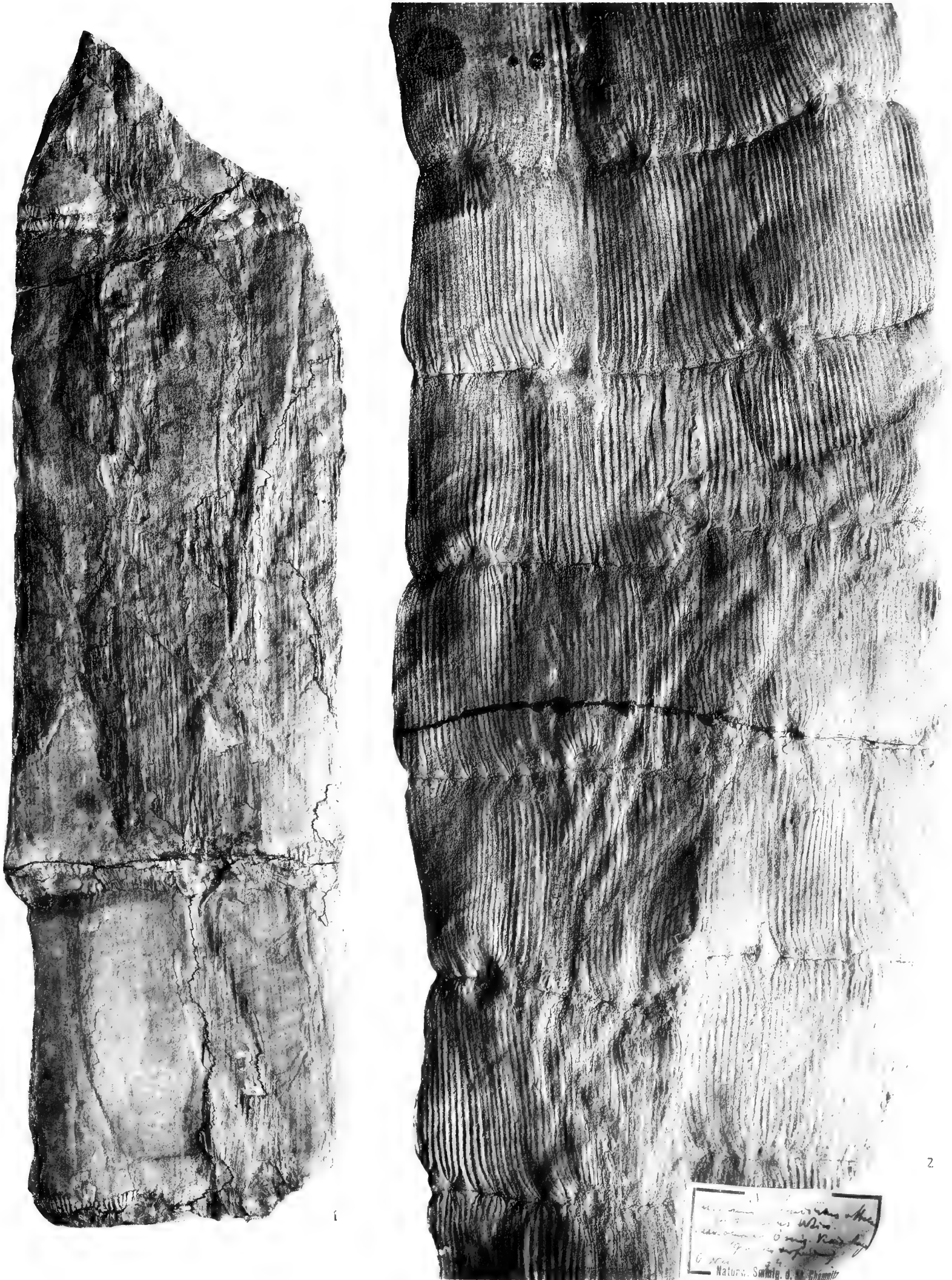
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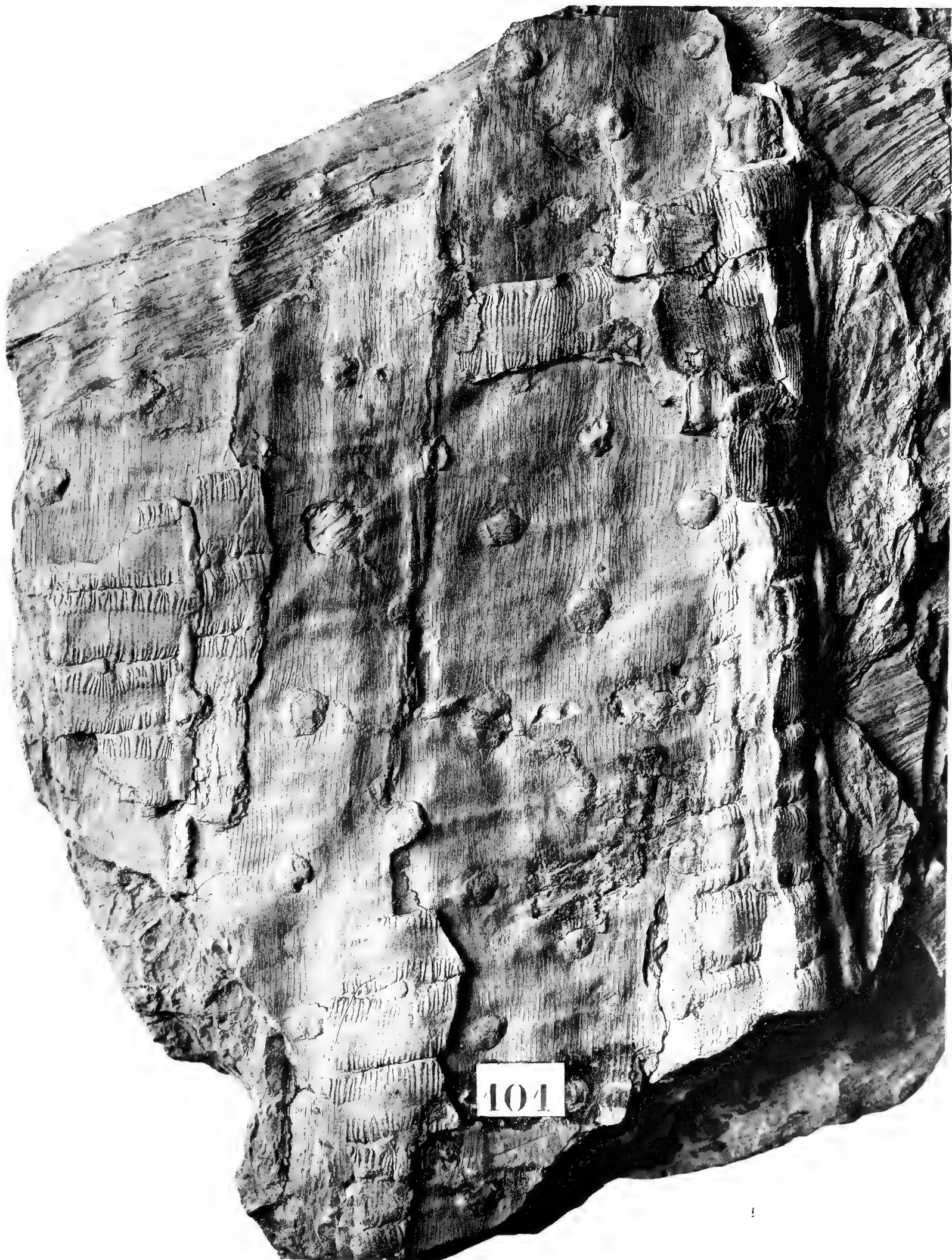
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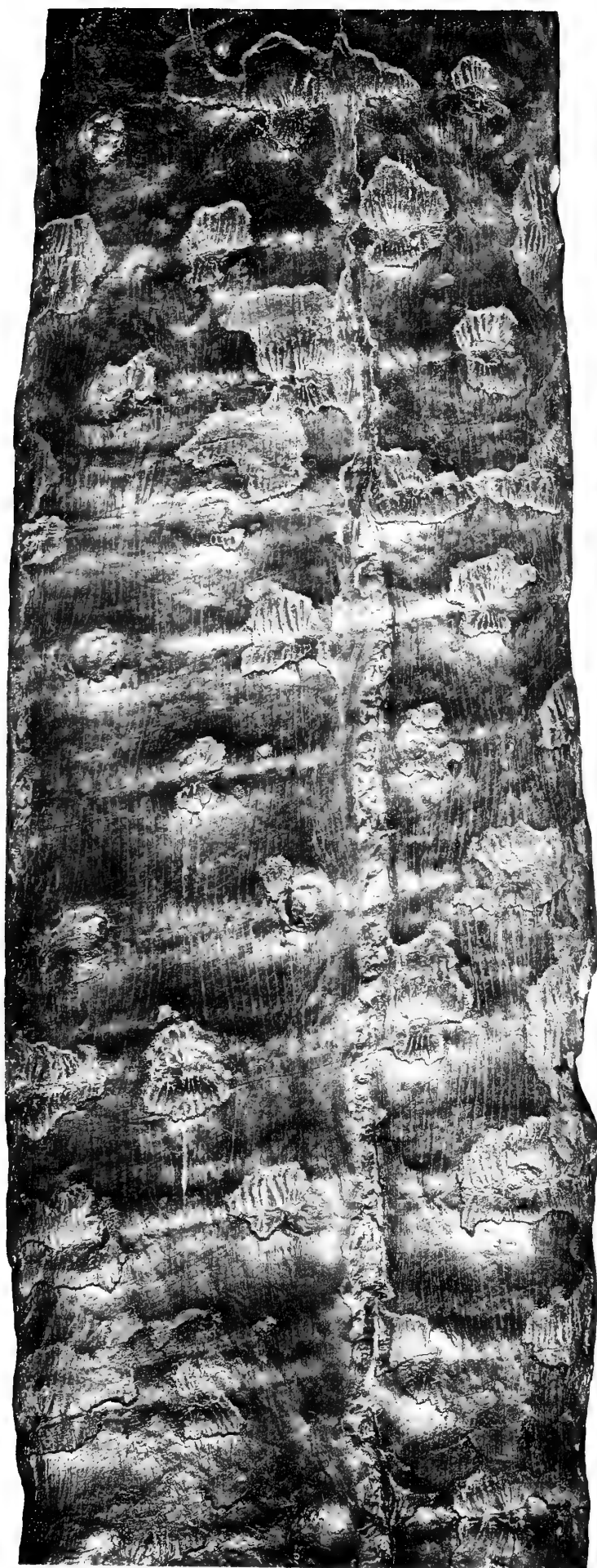




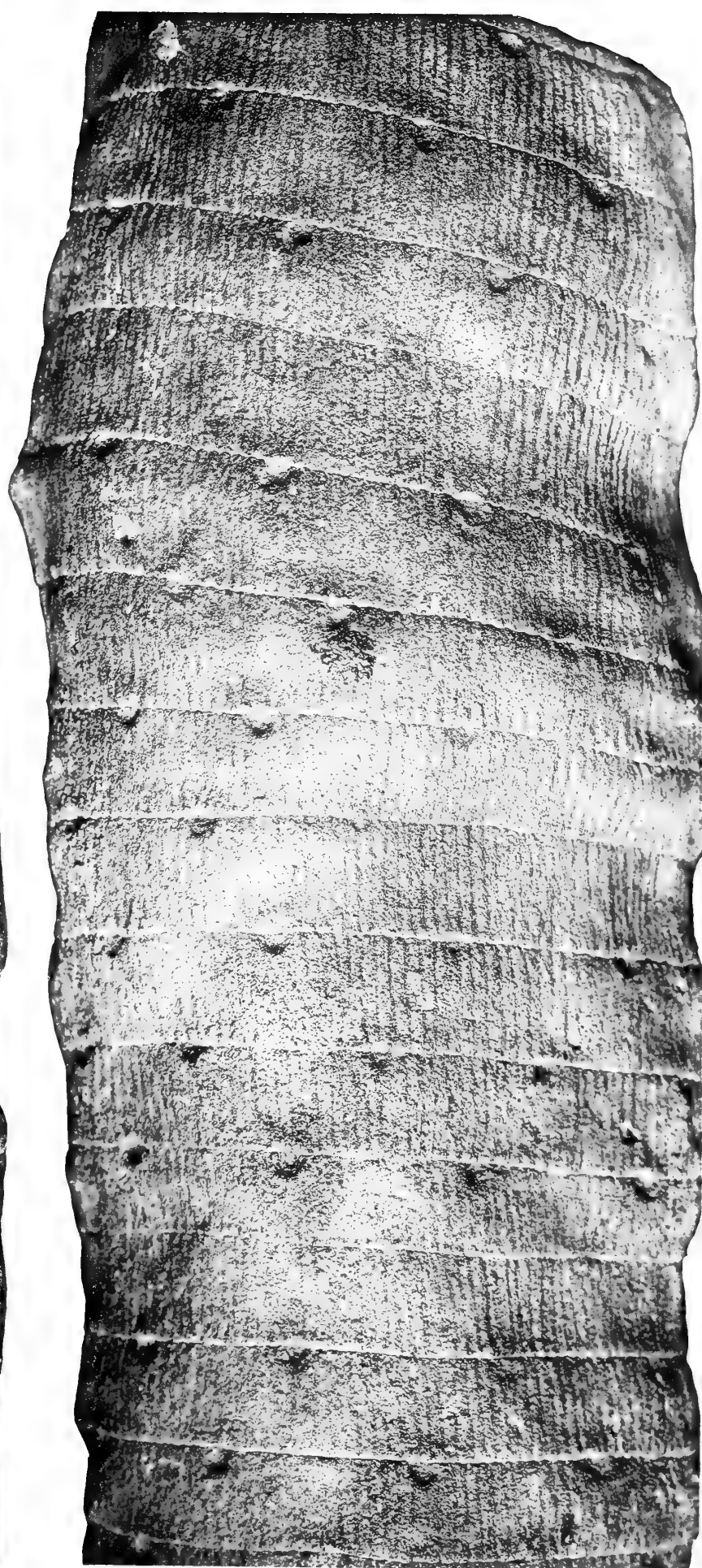








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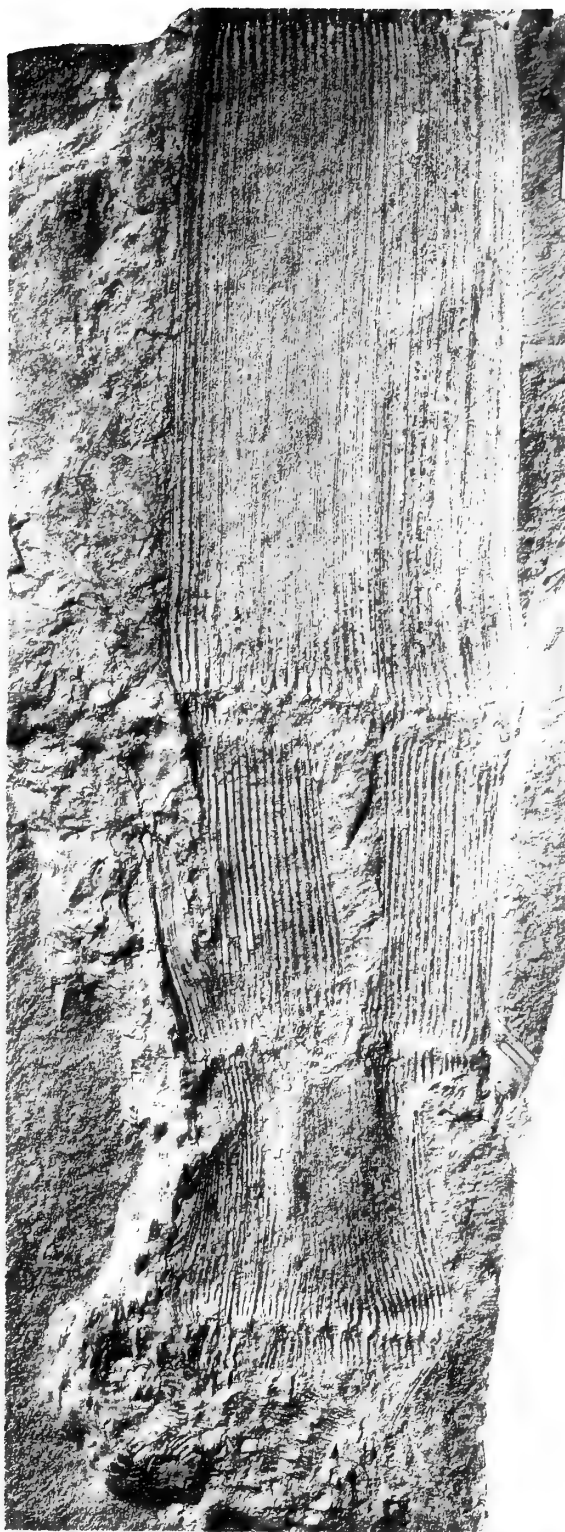
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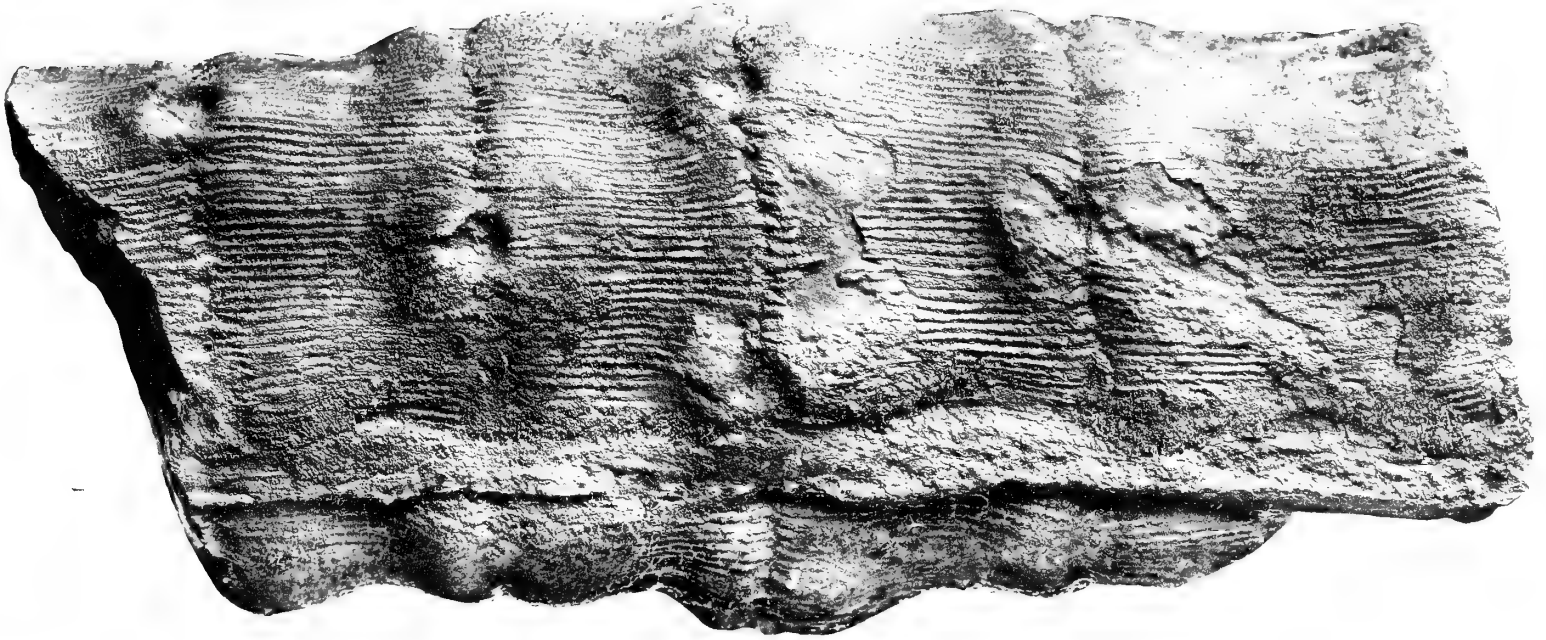
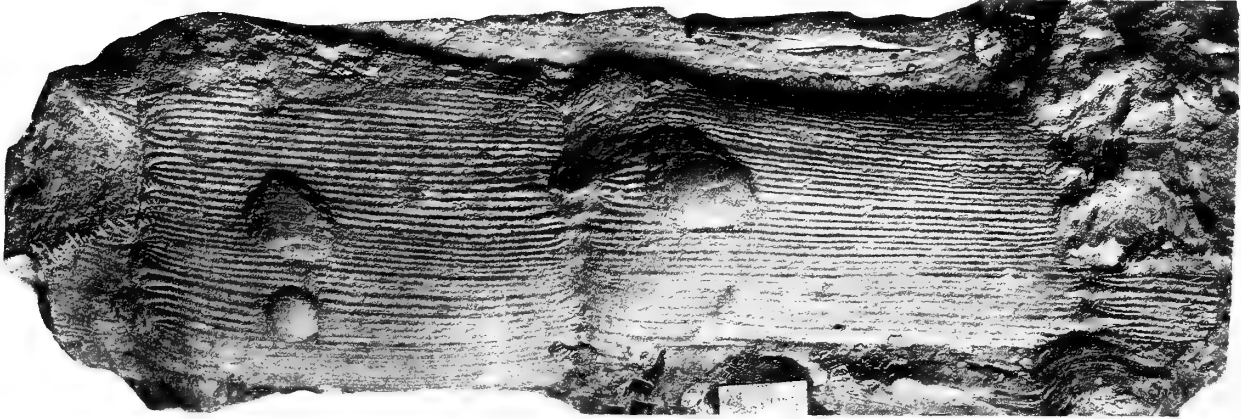
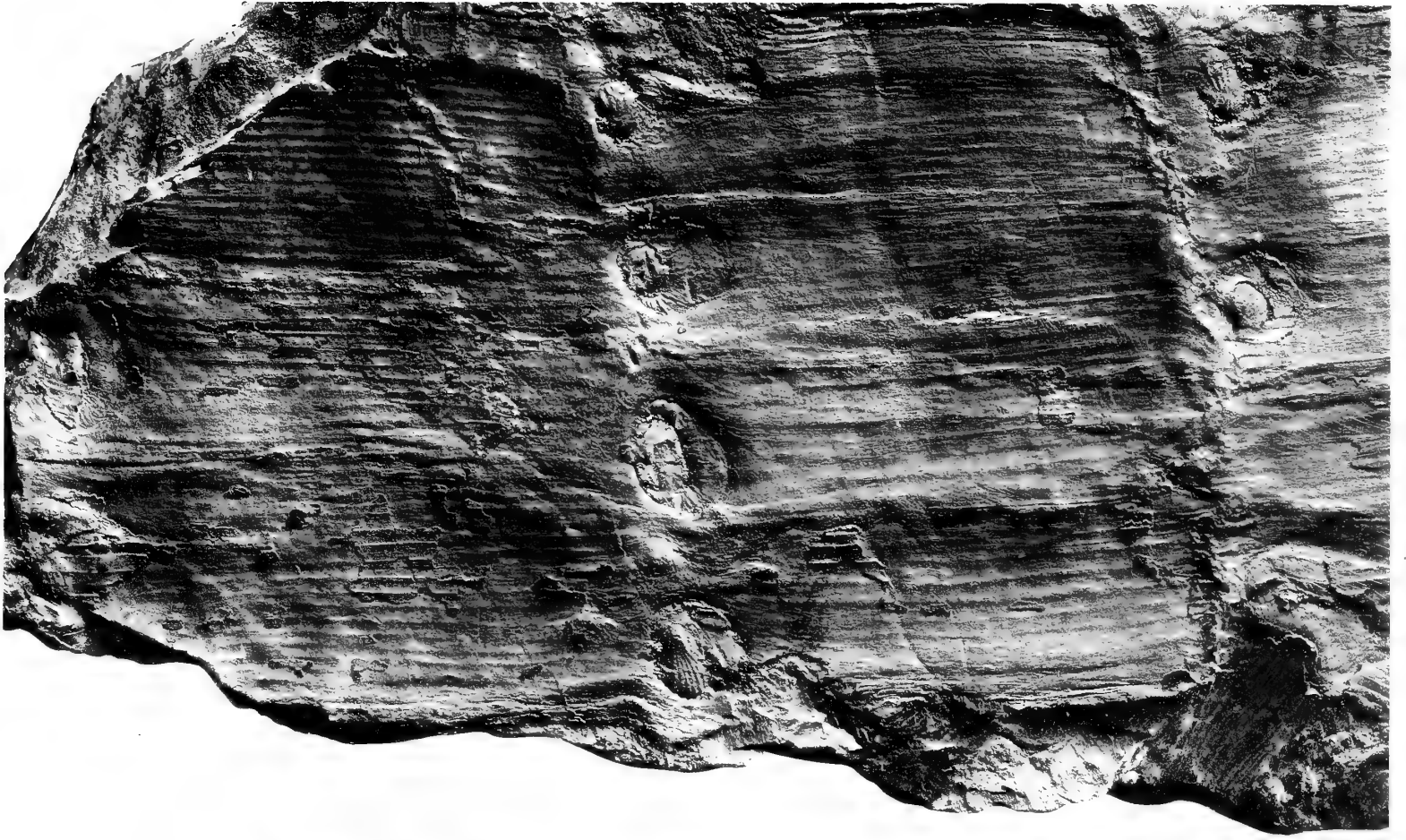
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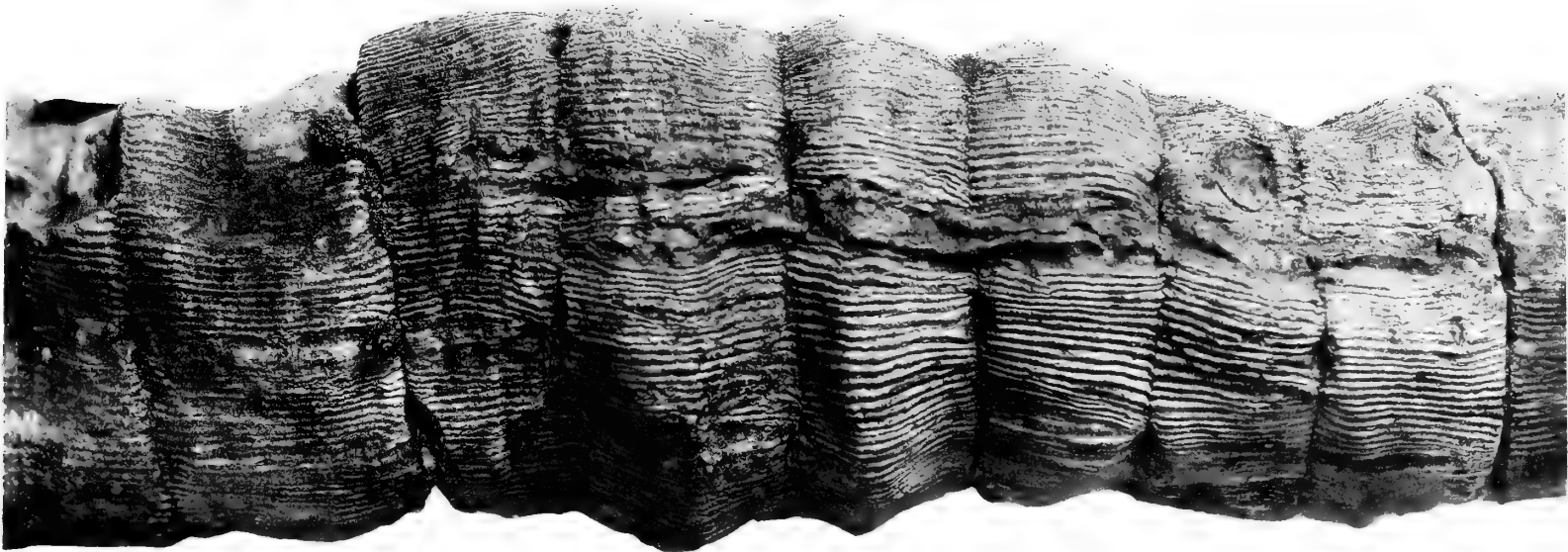
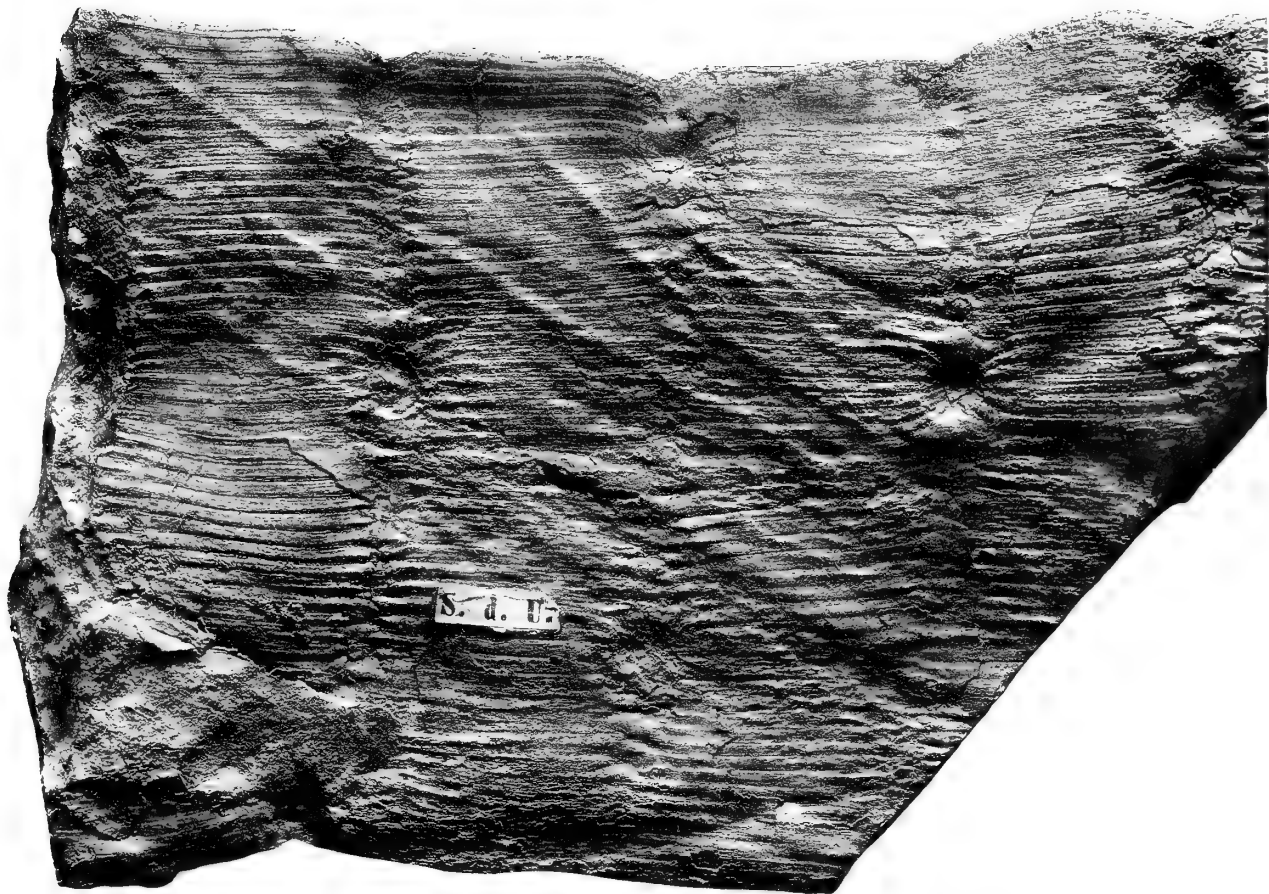
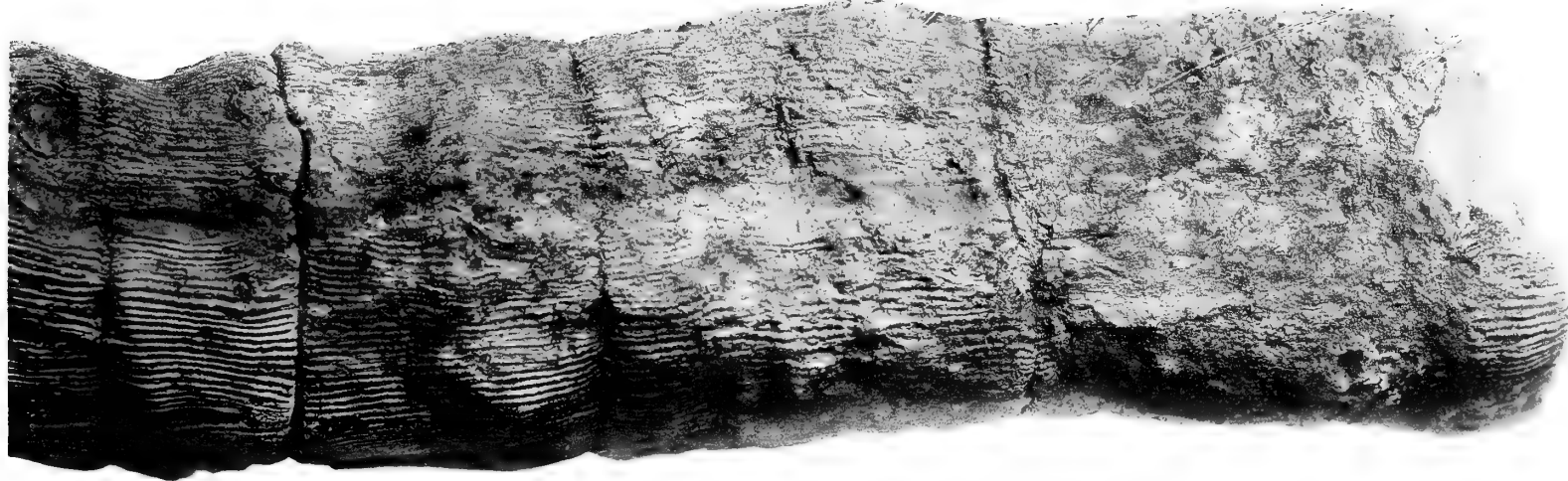








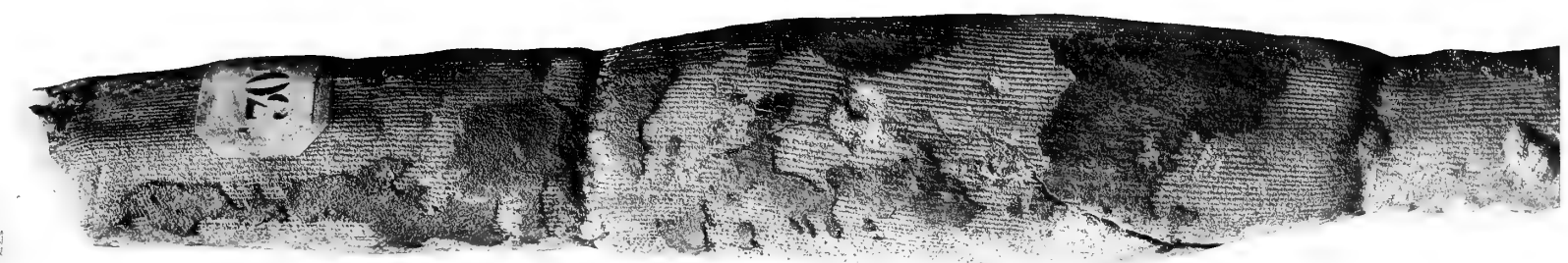
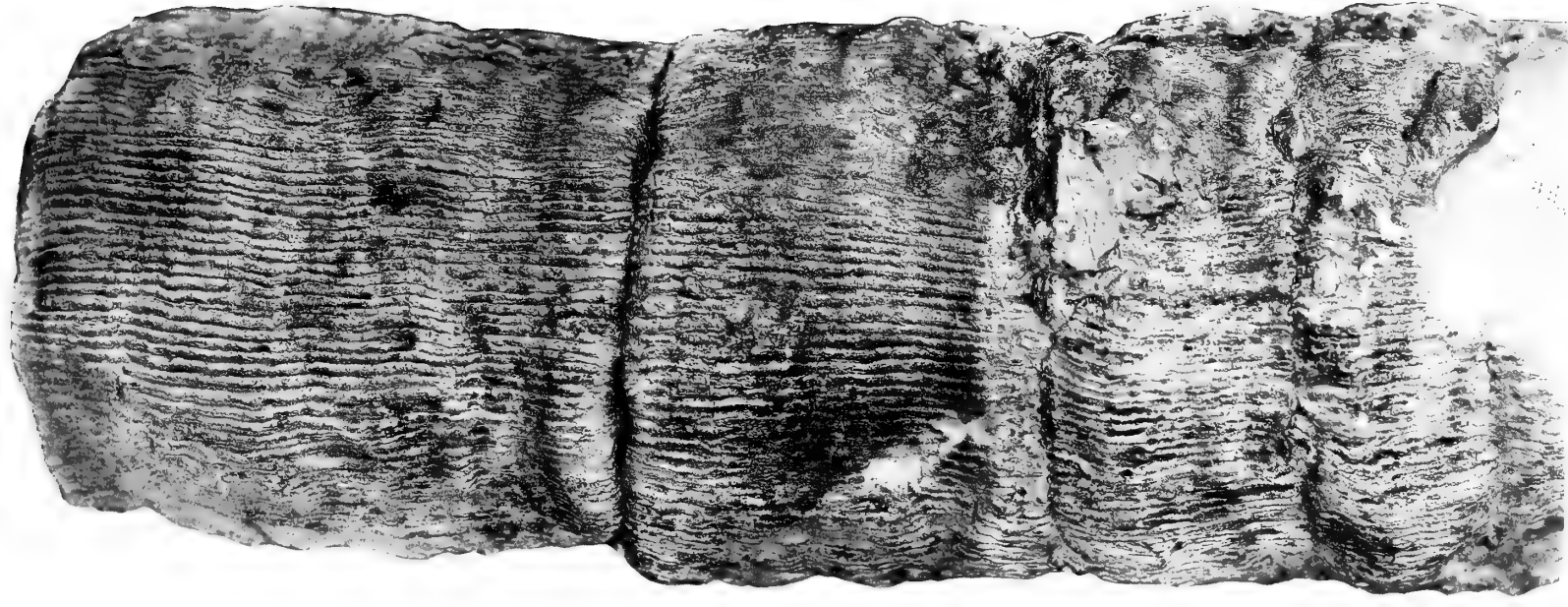








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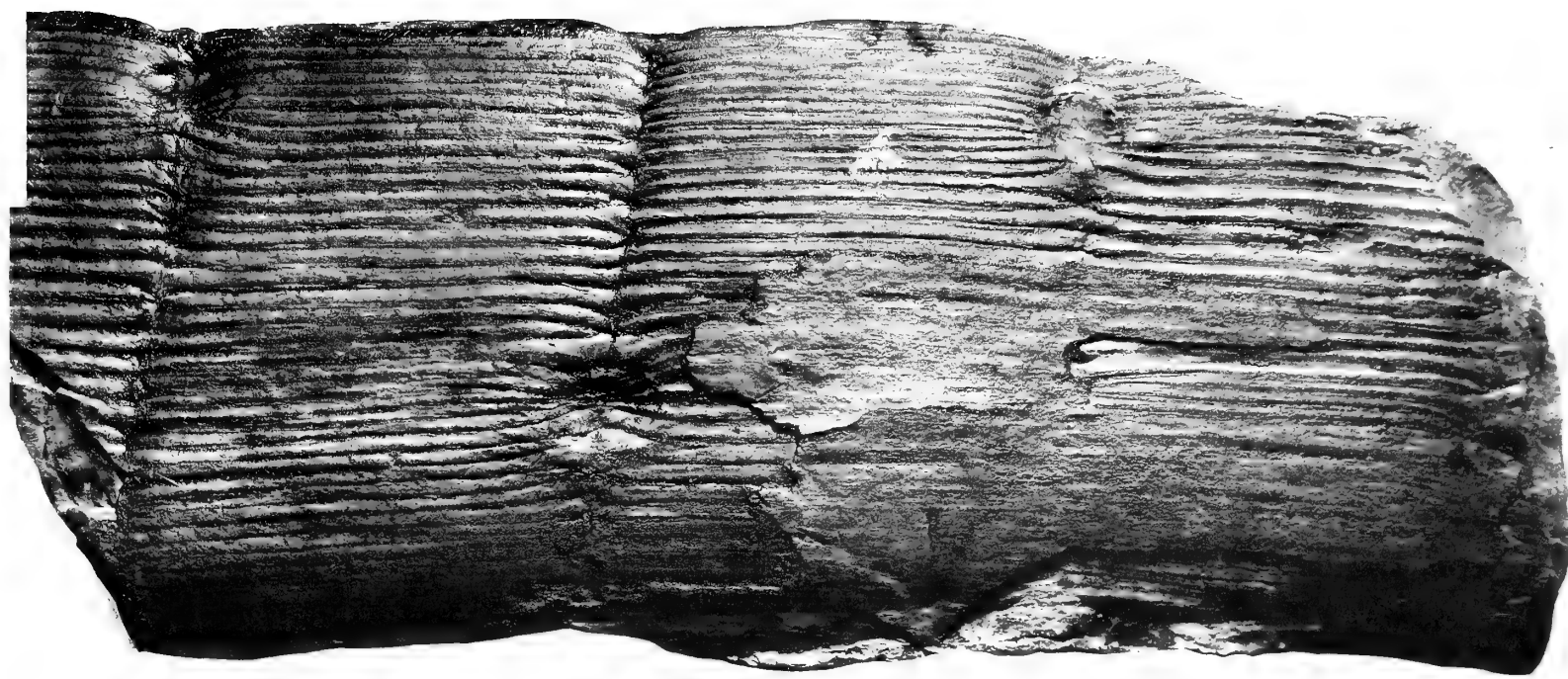


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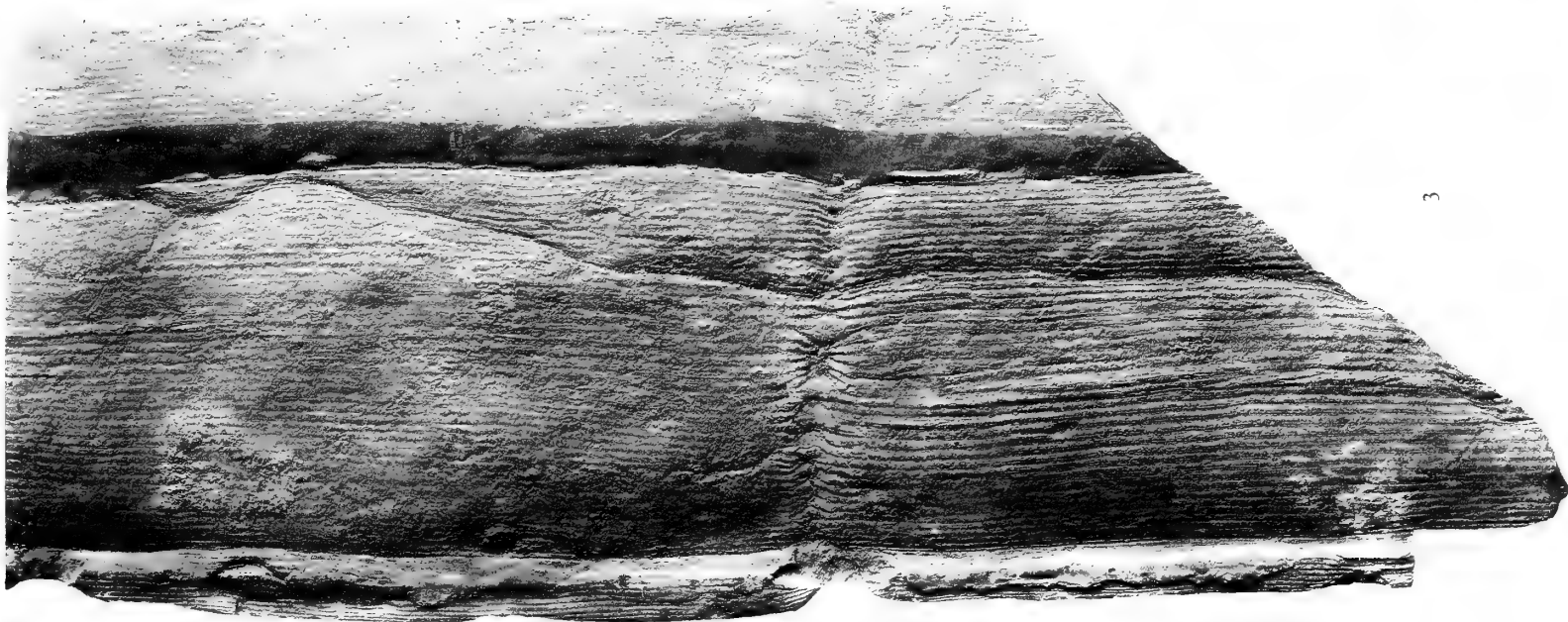
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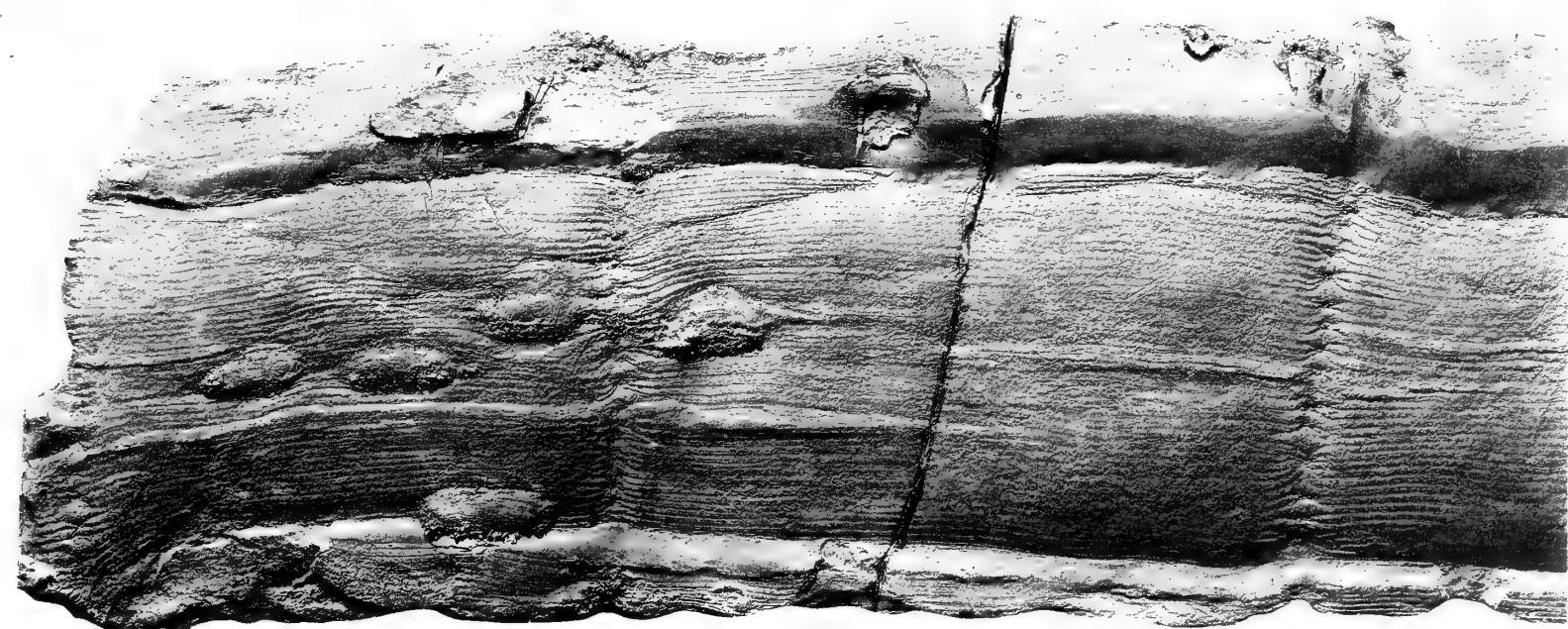


Phototypie L. van Leer & Co.

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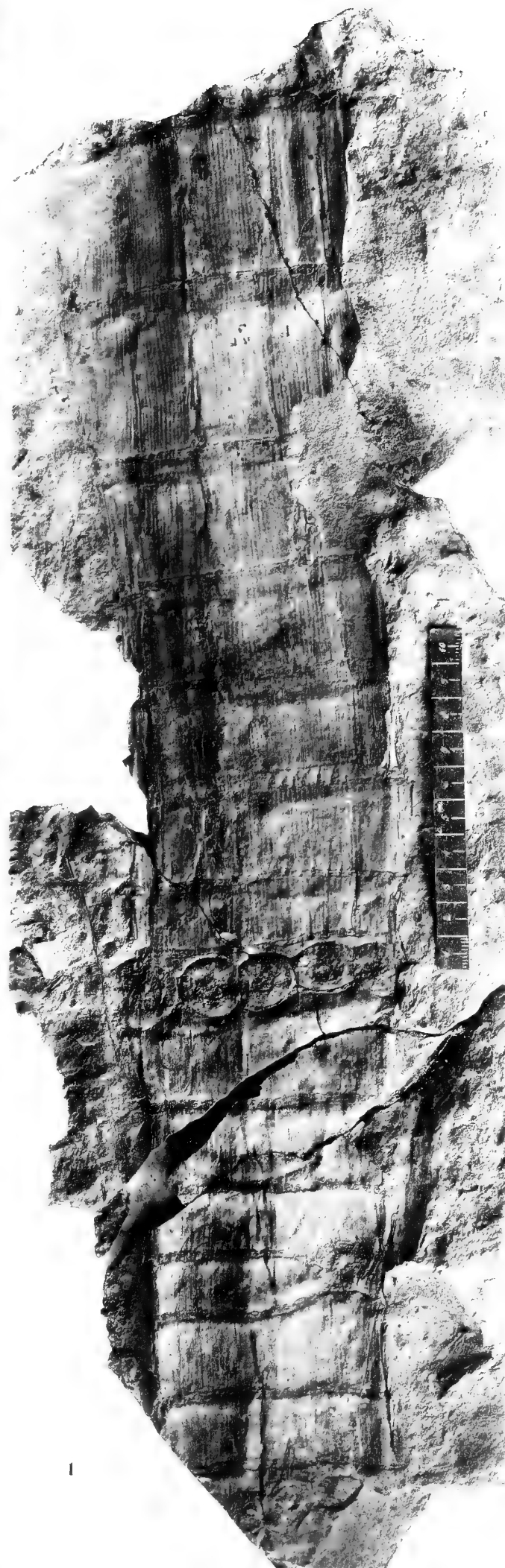
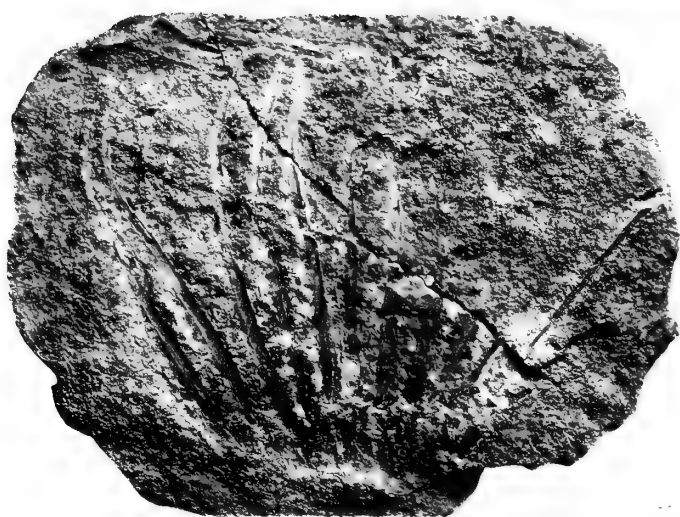
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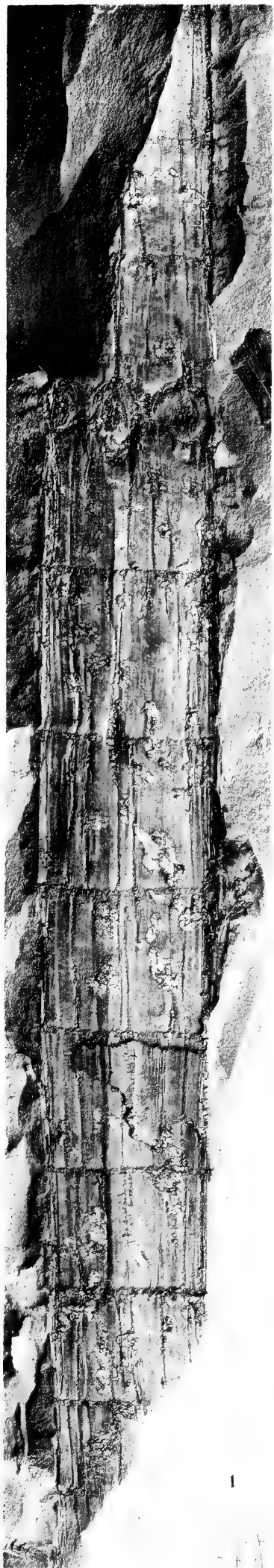




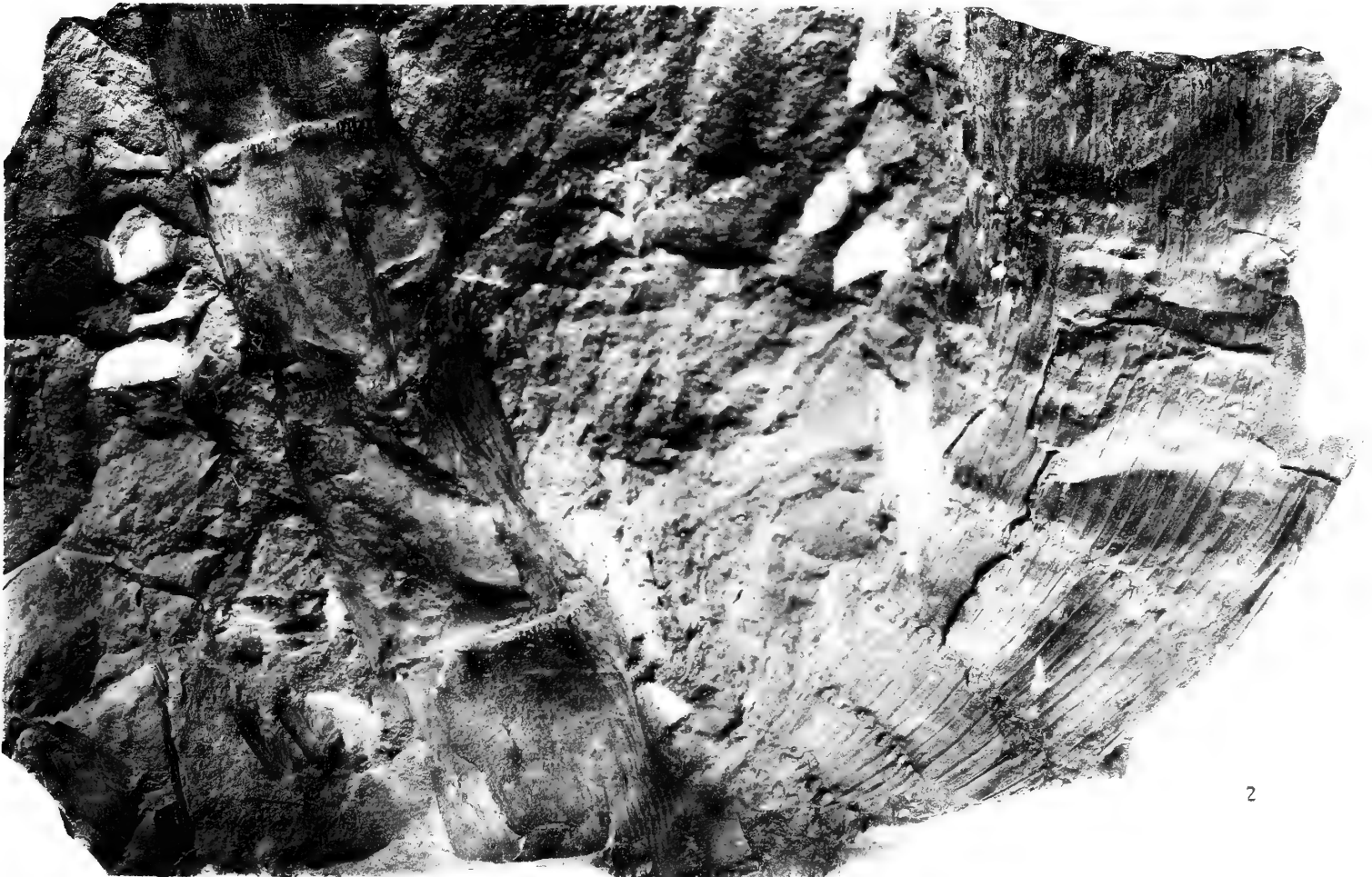
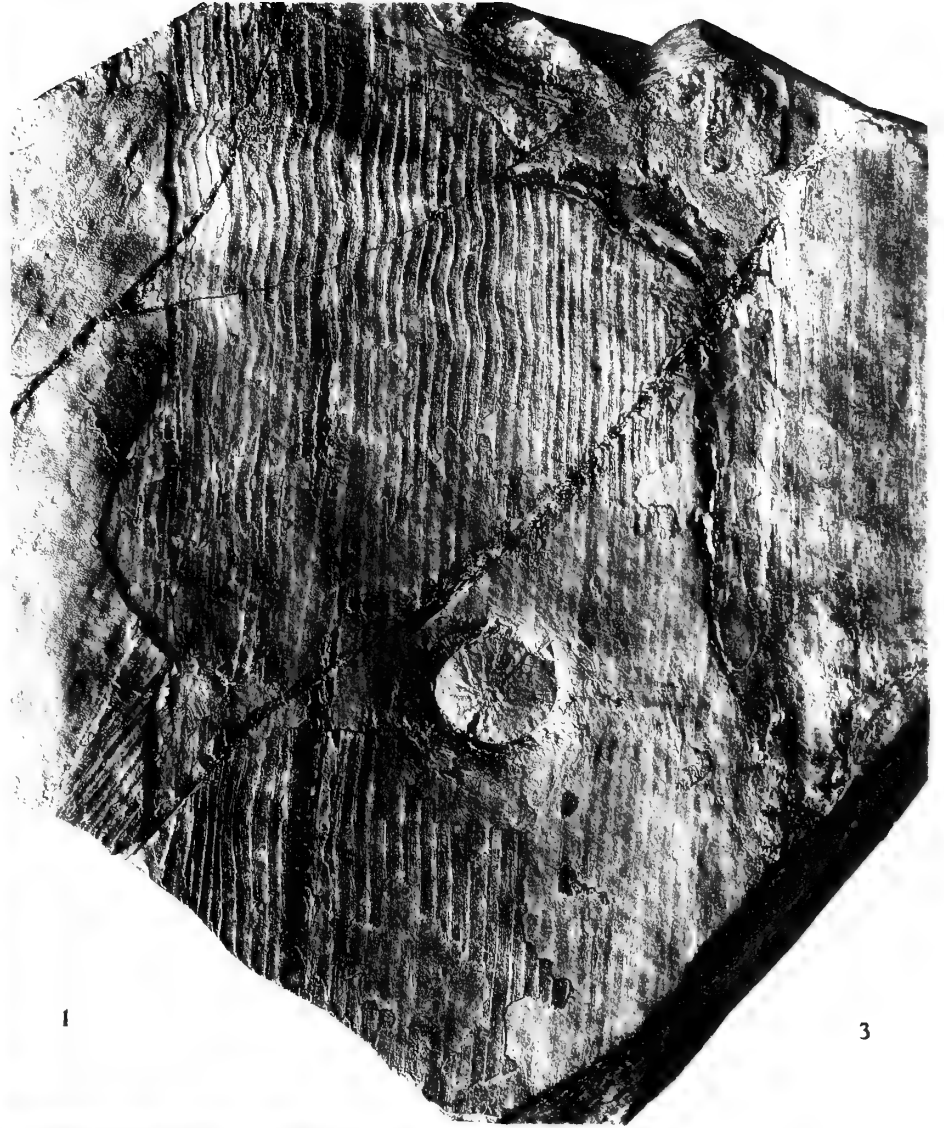






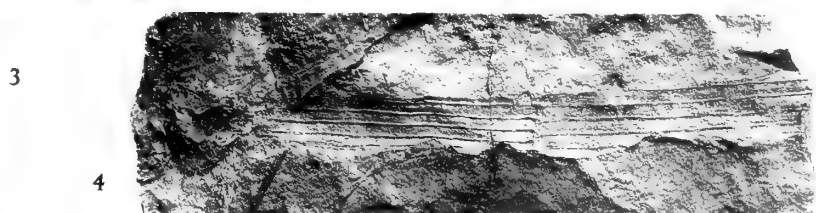
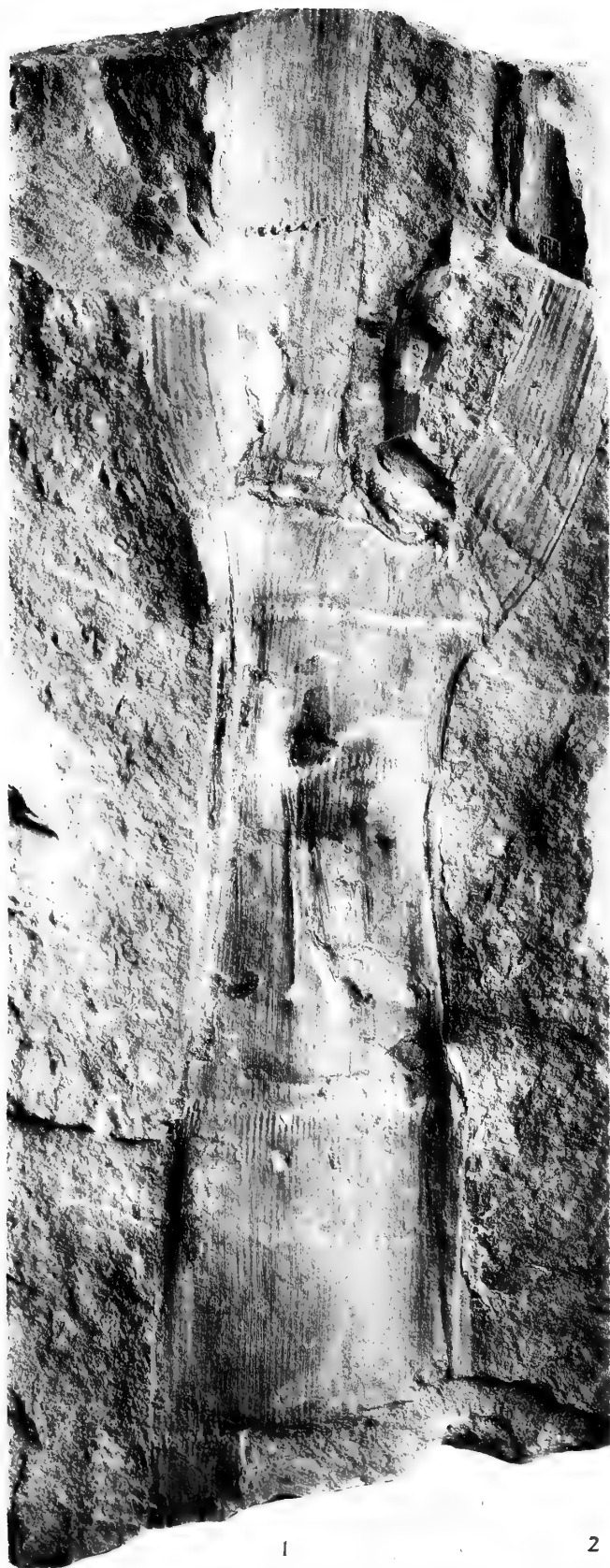




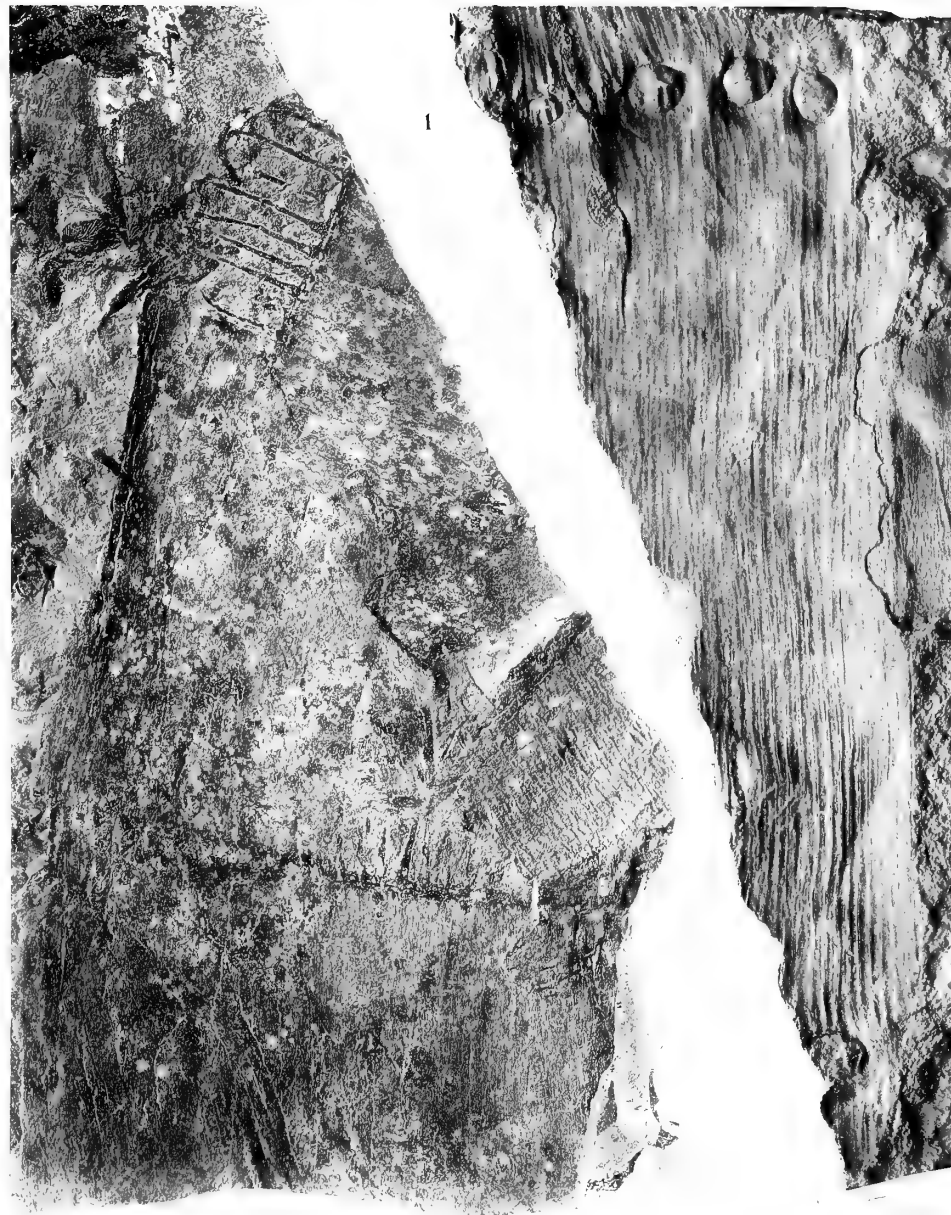




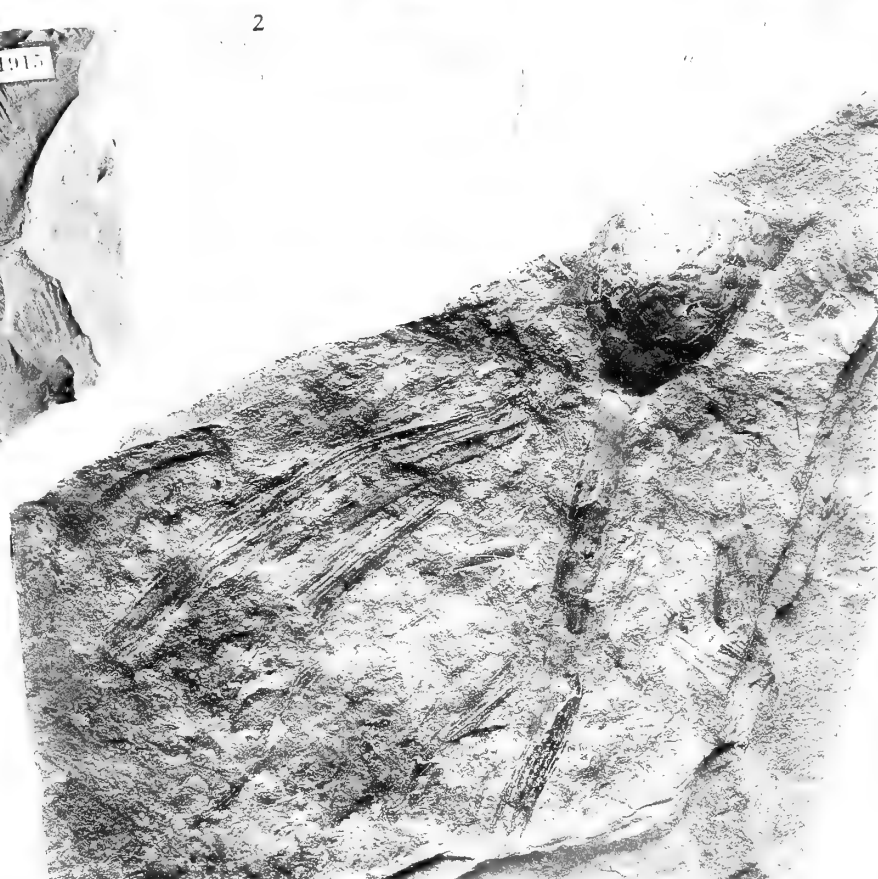








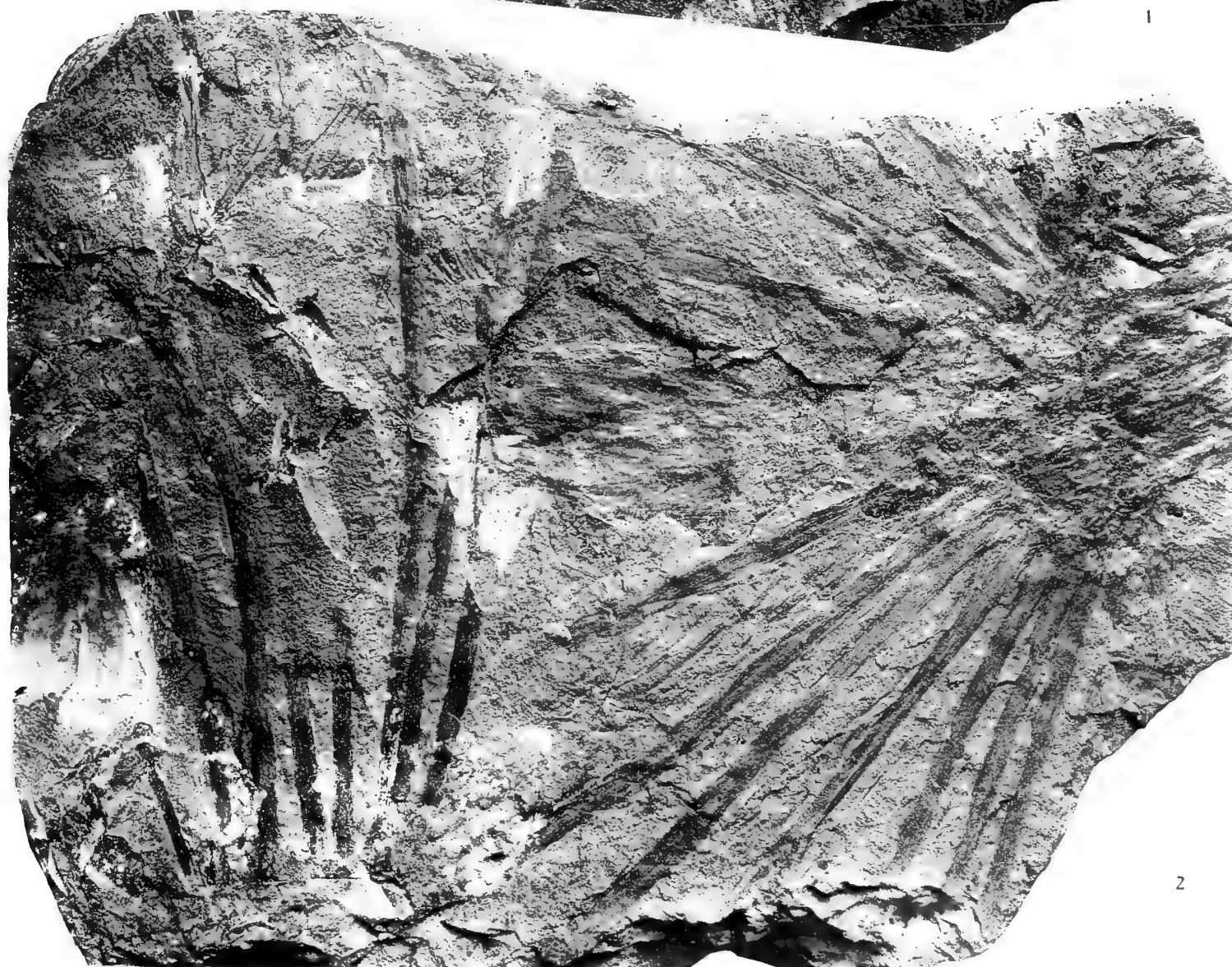
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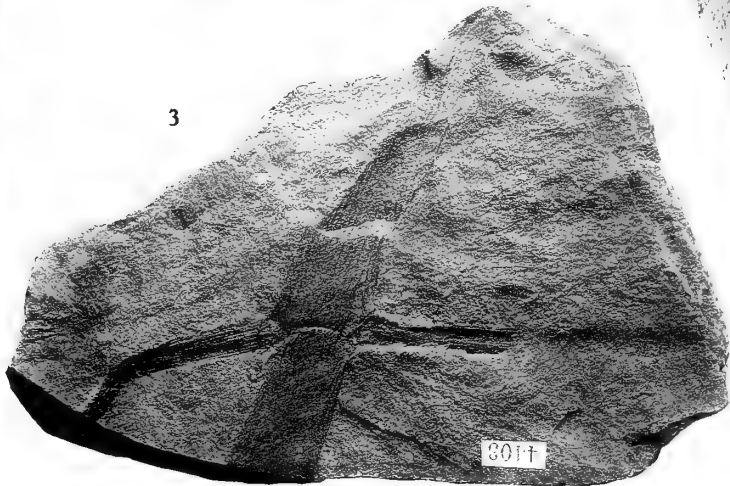
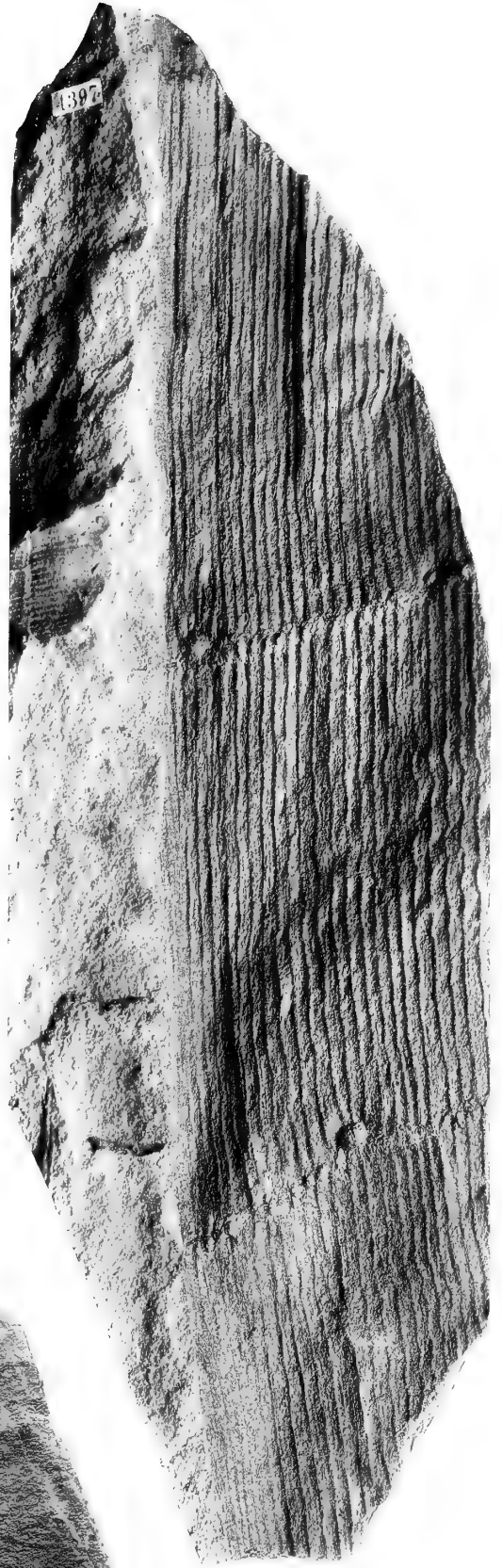
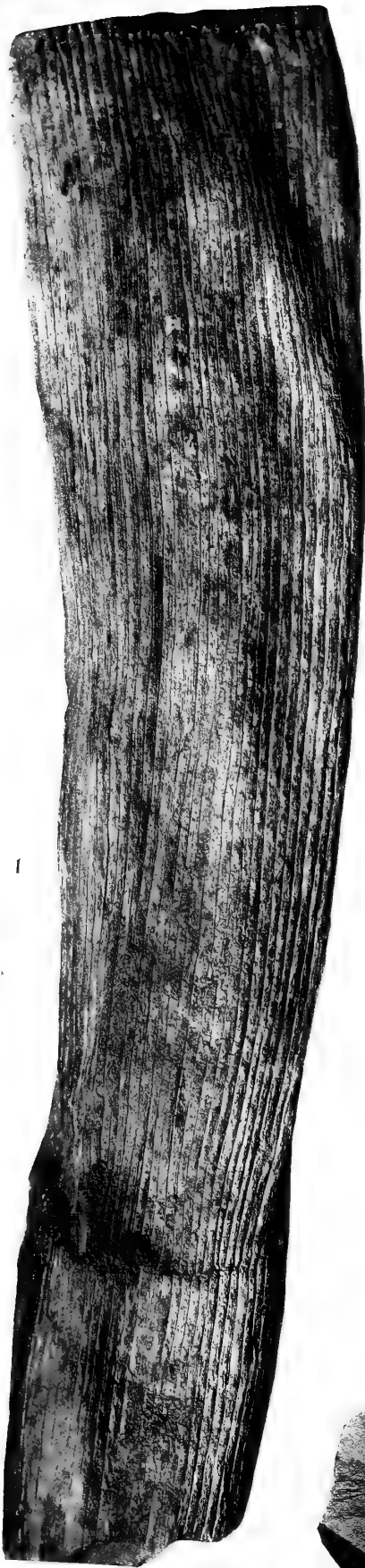




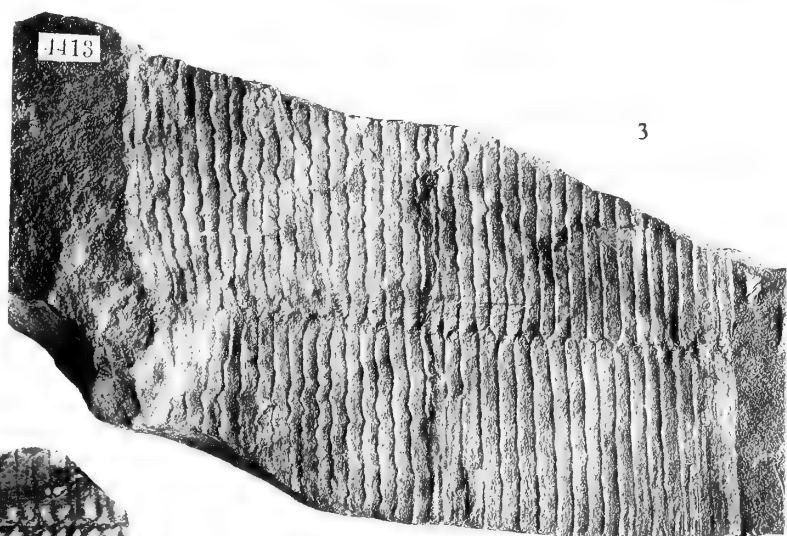
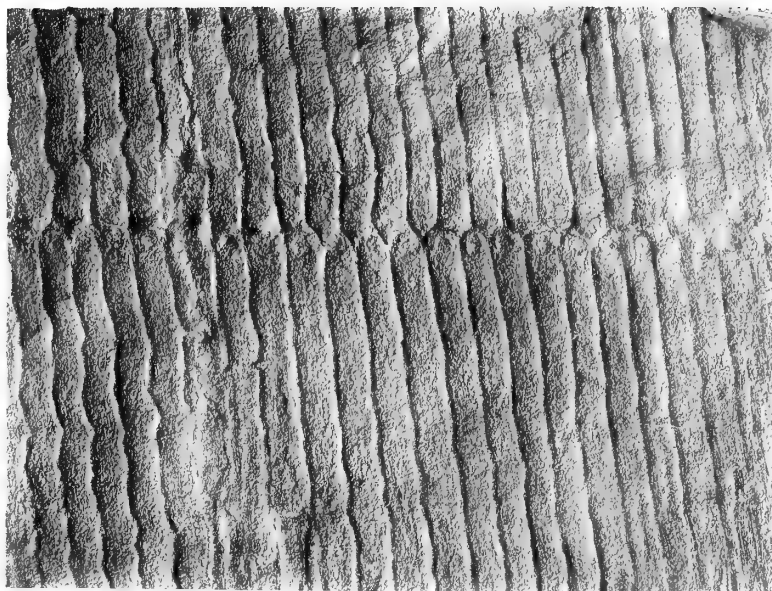
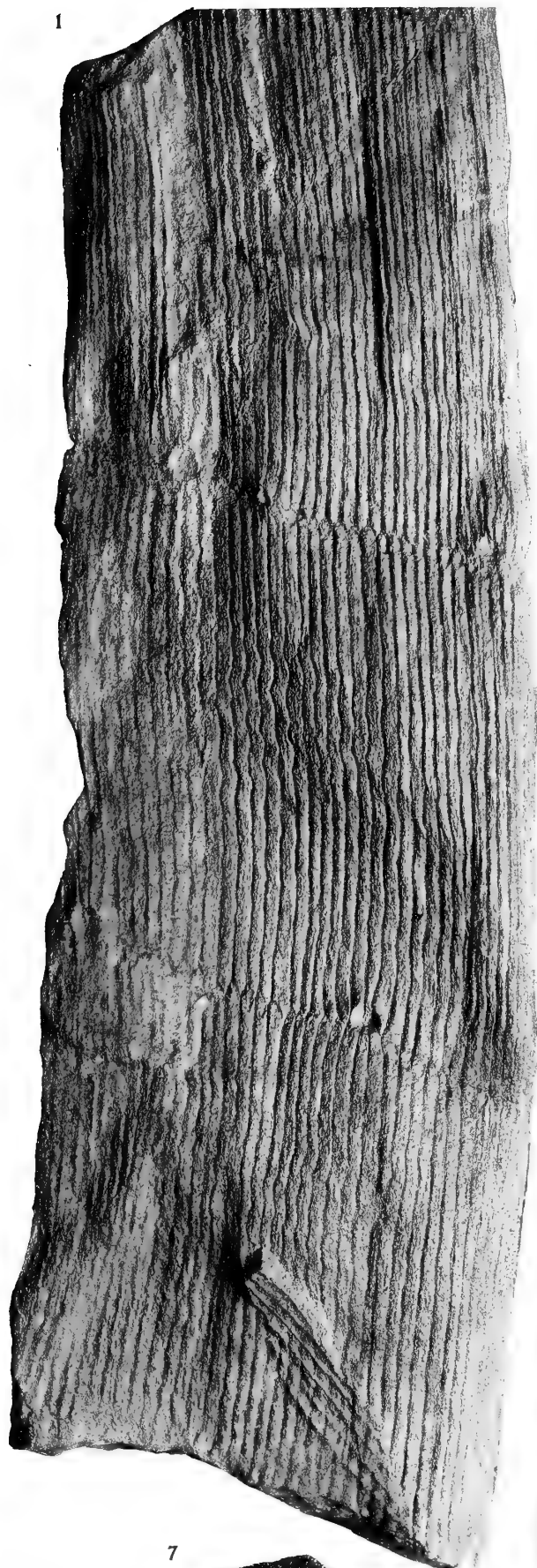
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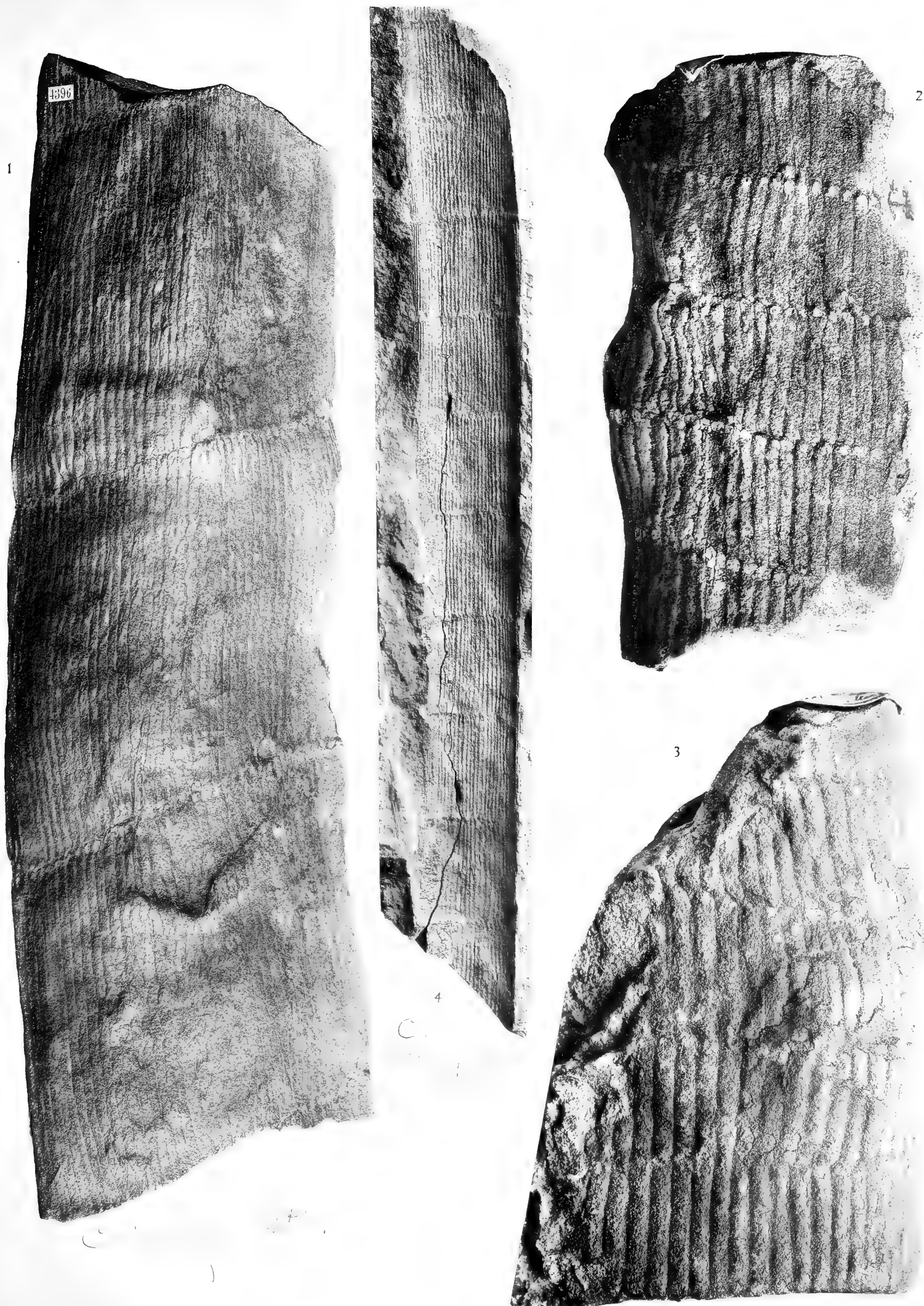










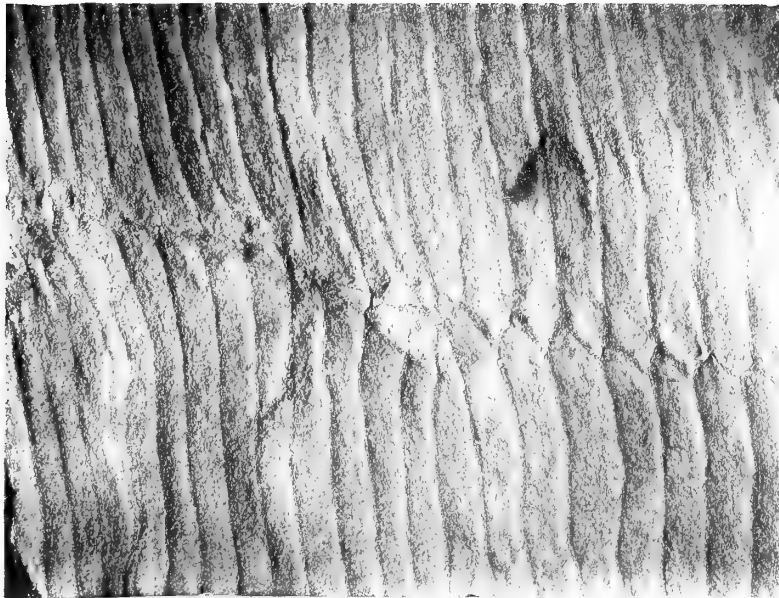




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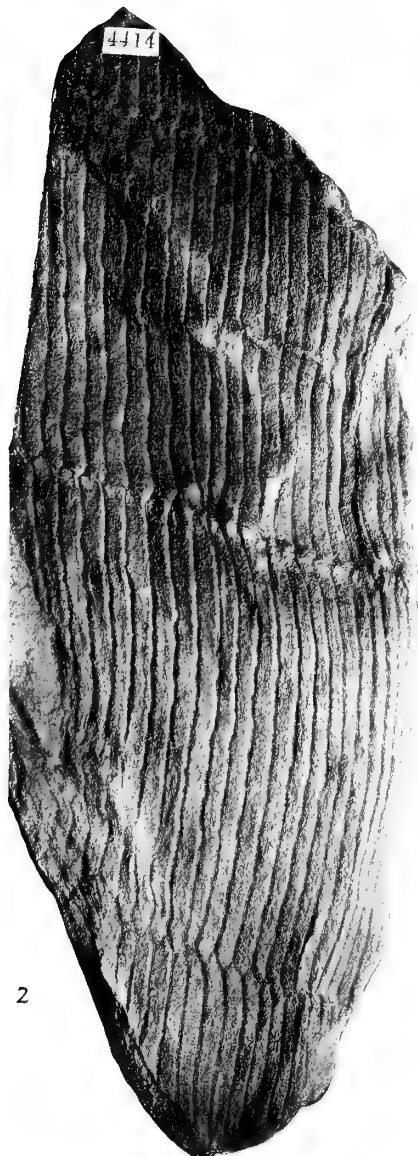
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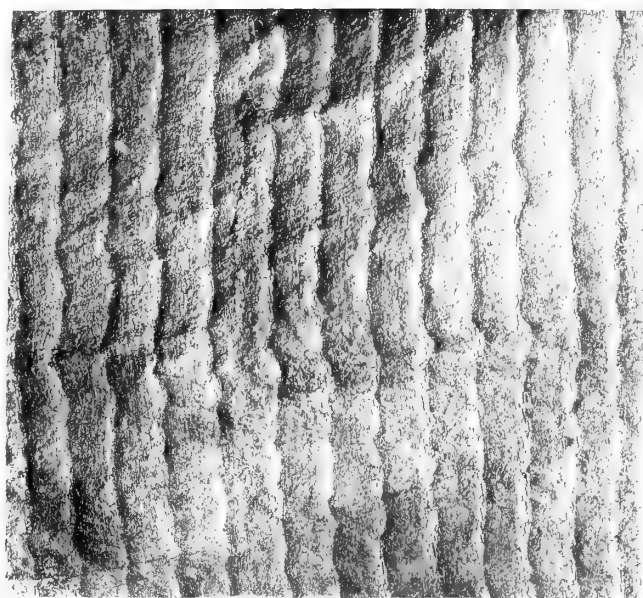
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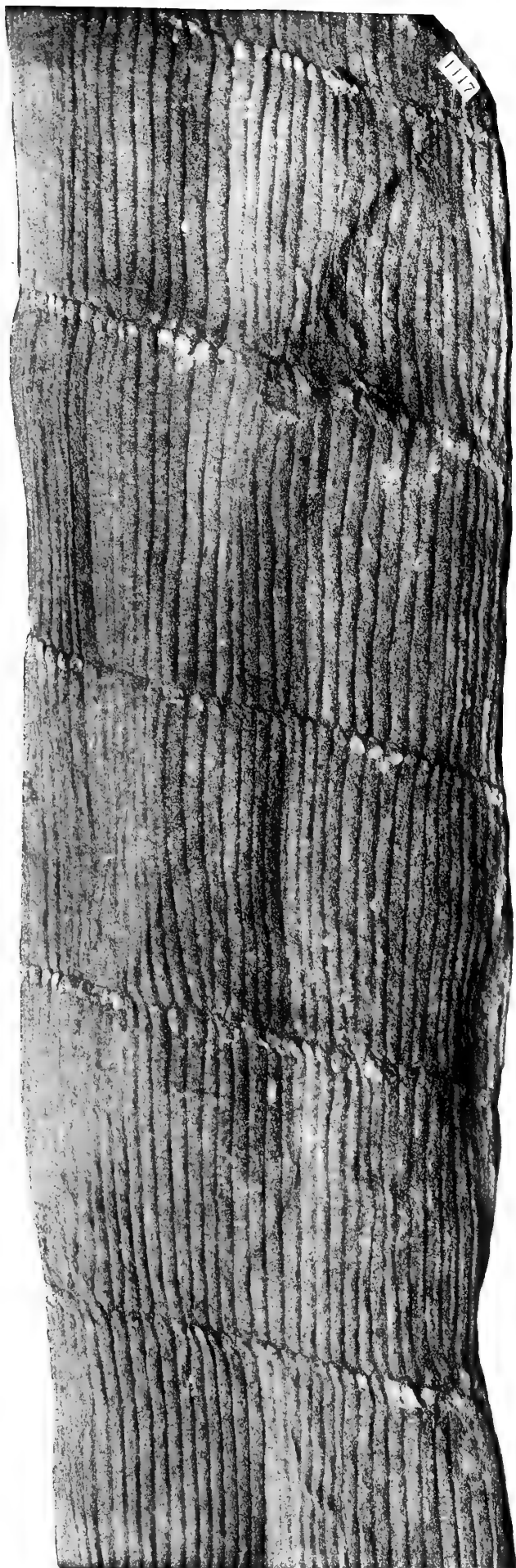
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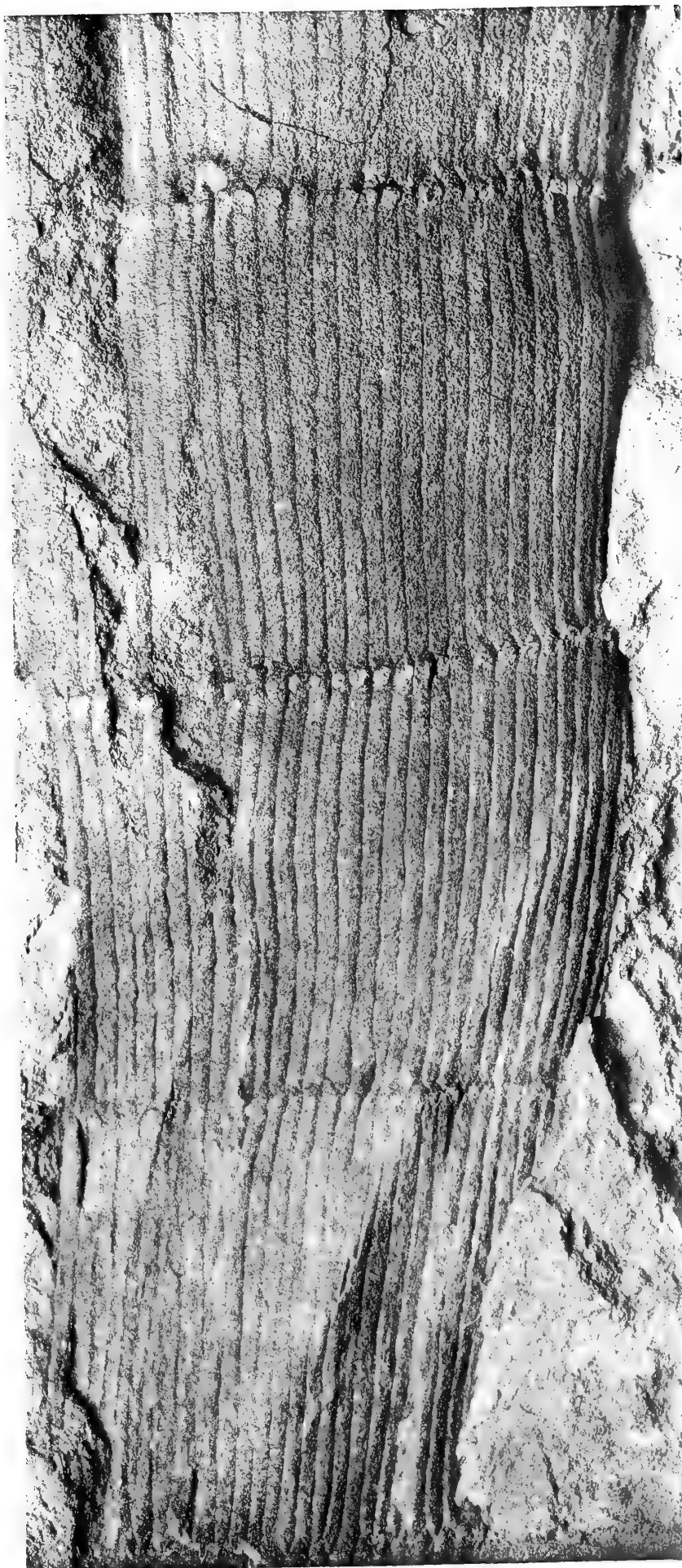
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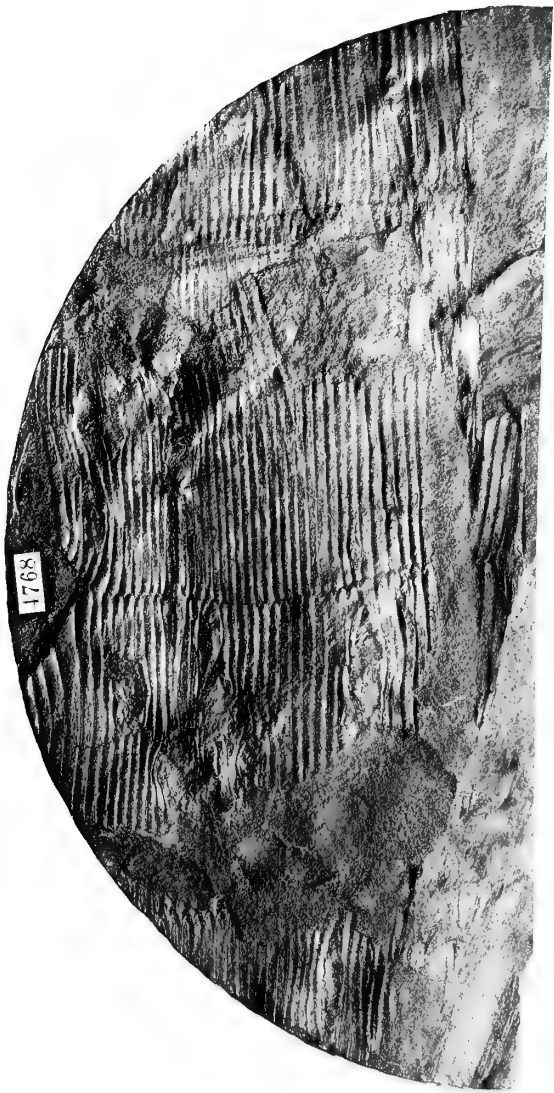


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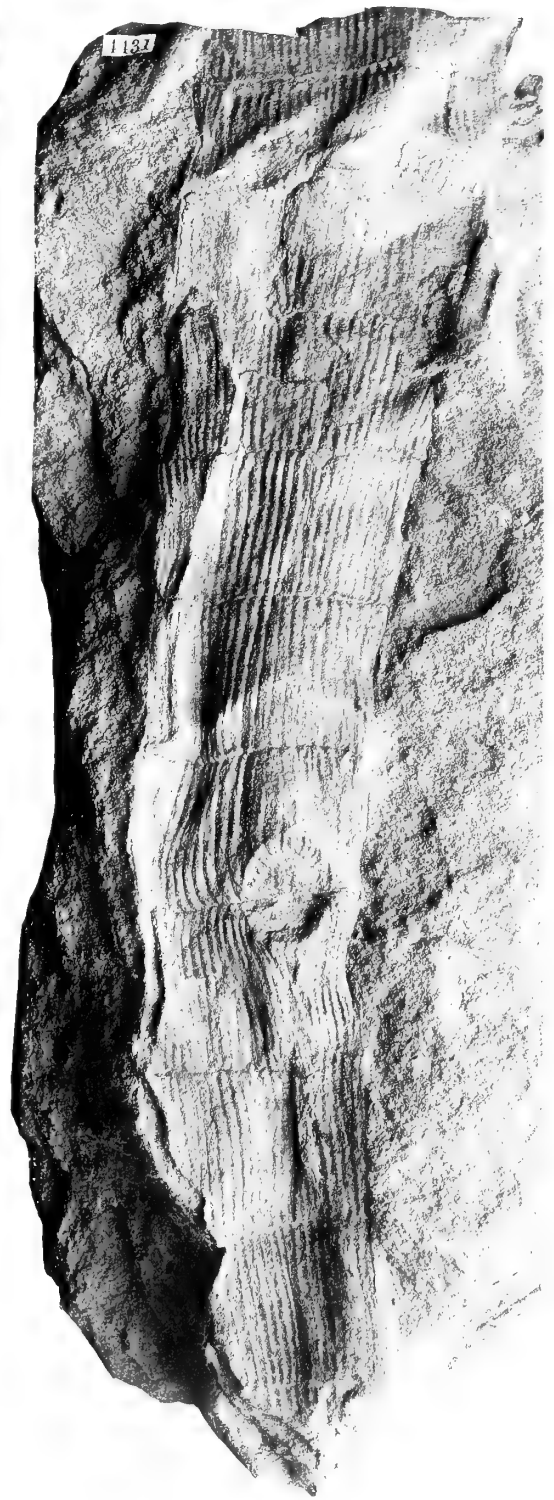
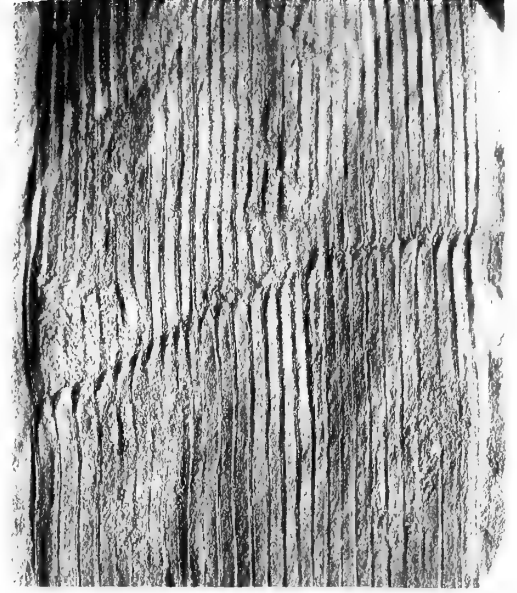
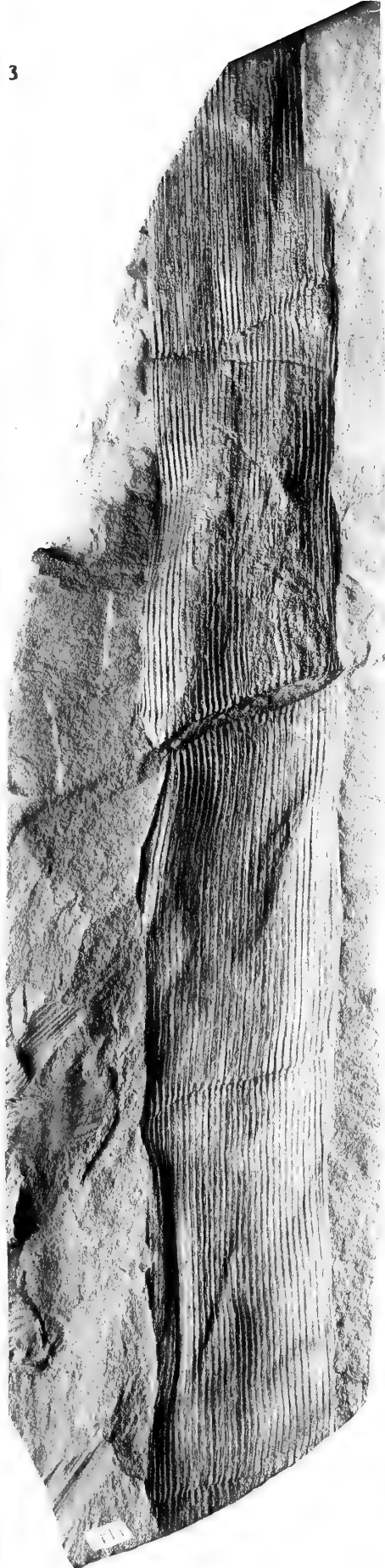


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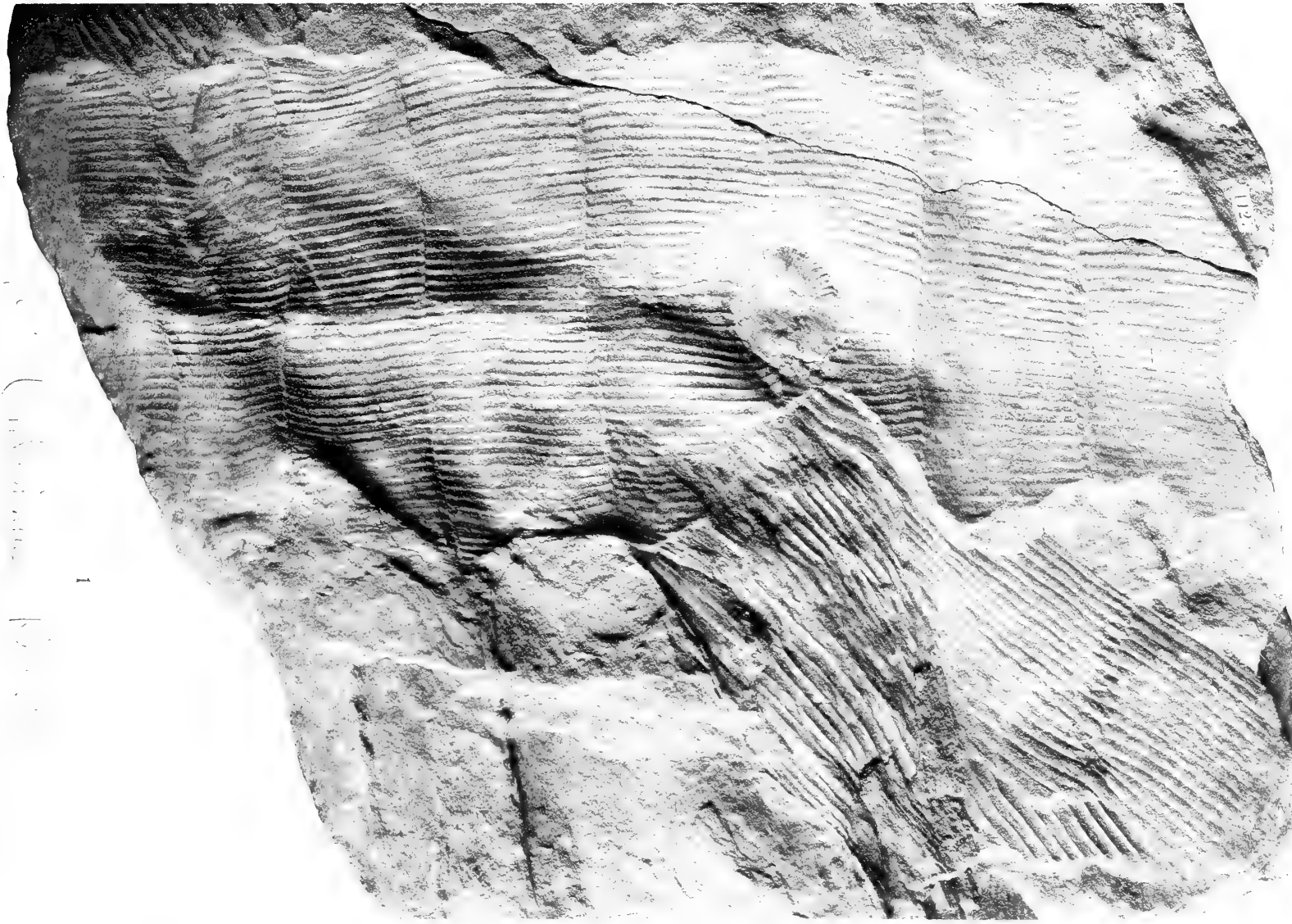
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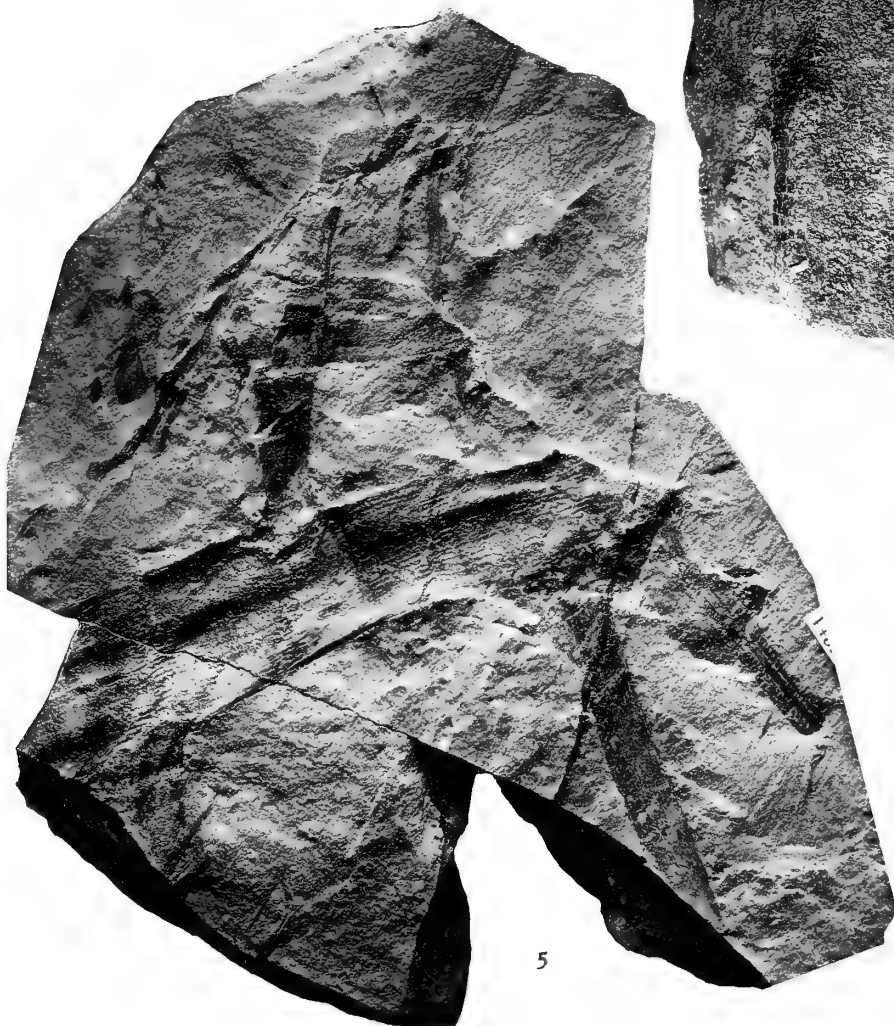
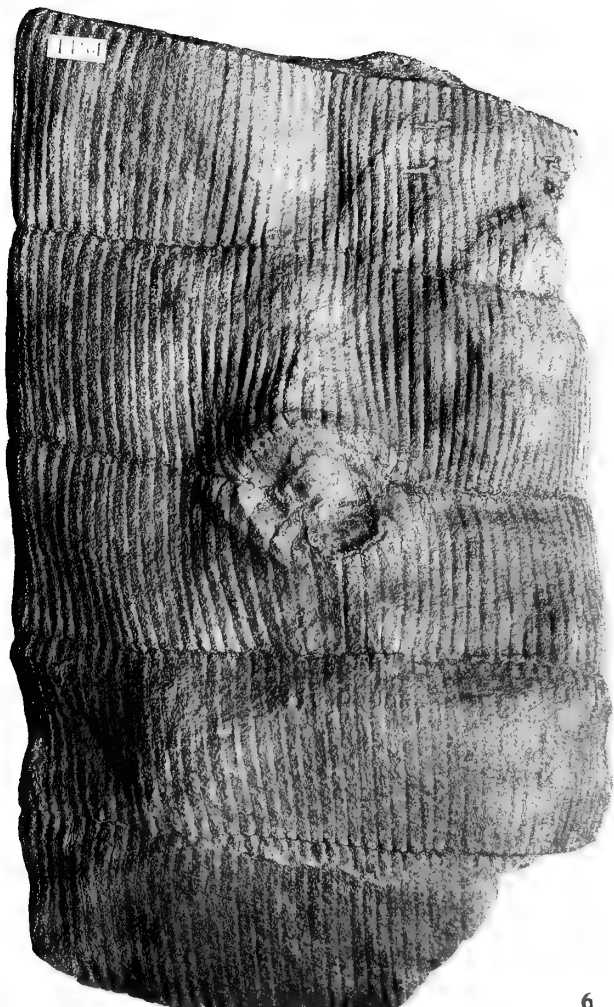




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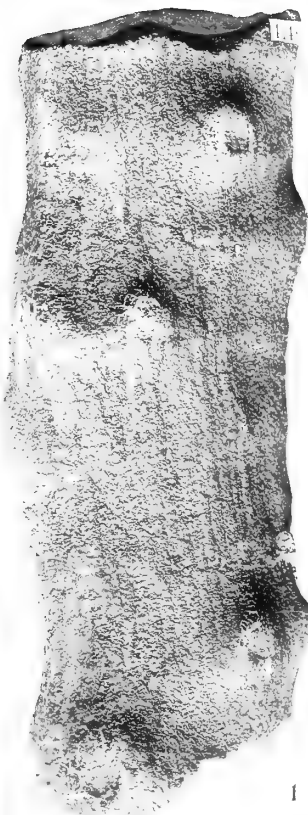




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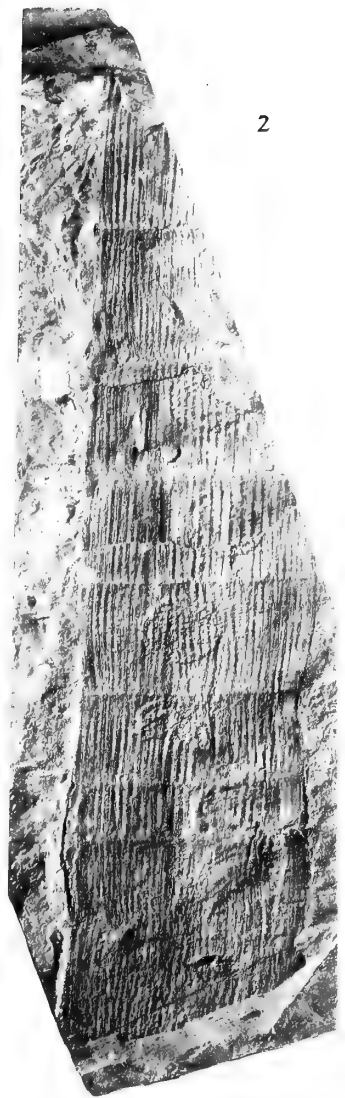
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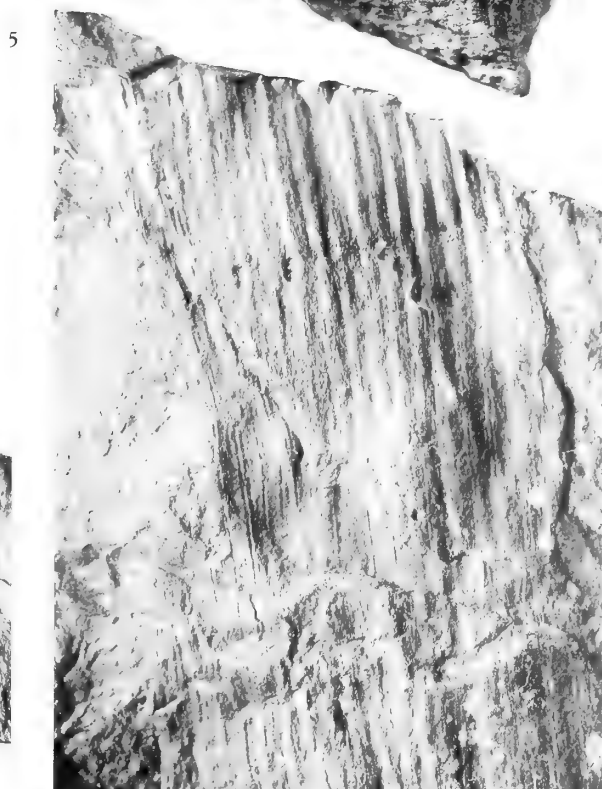




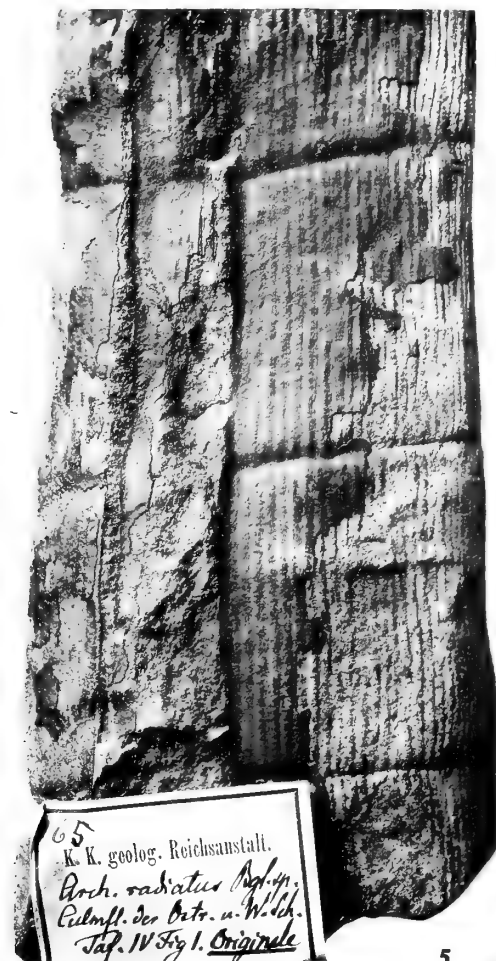
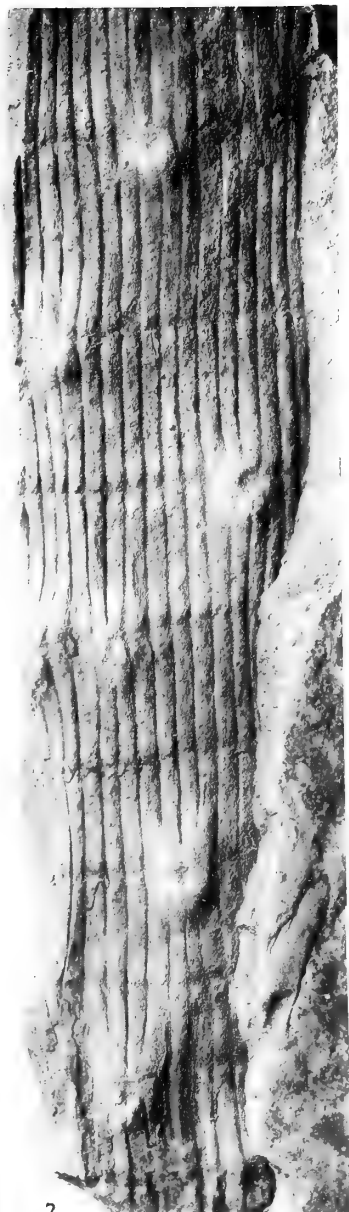












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K. K. geolog. Reichsanstalt.  
Arch. radiatus Ag. sp.  
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Tab. IV Fig. 1. Originale

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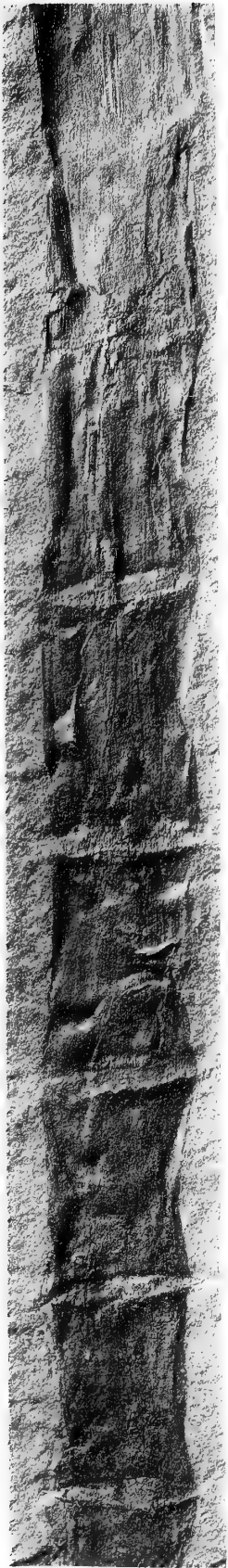




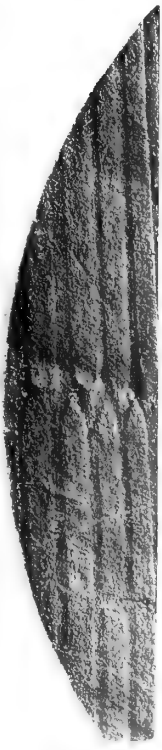




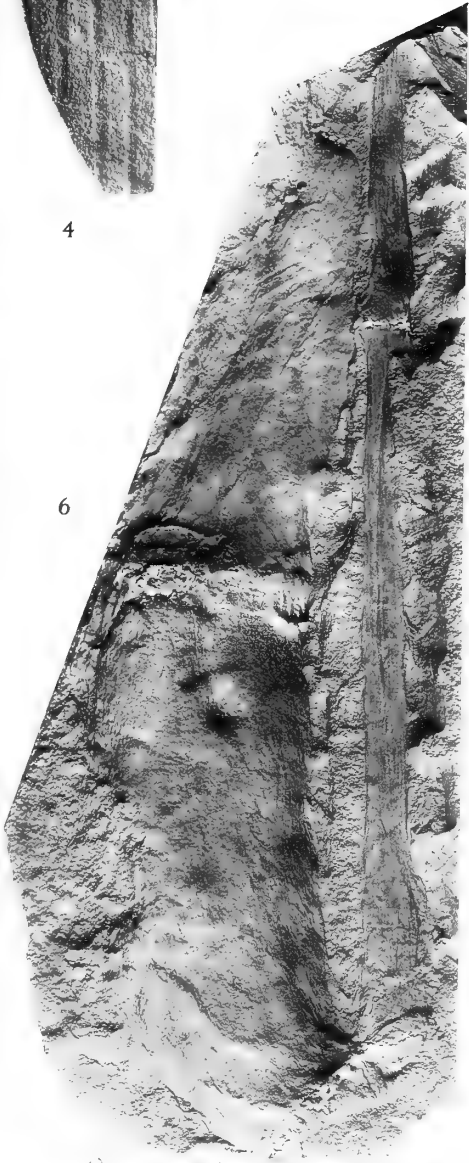




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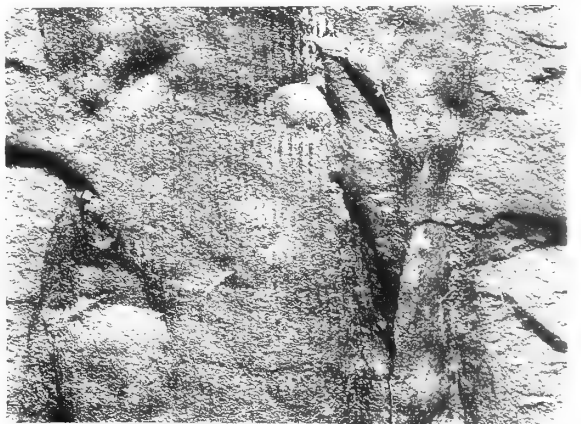
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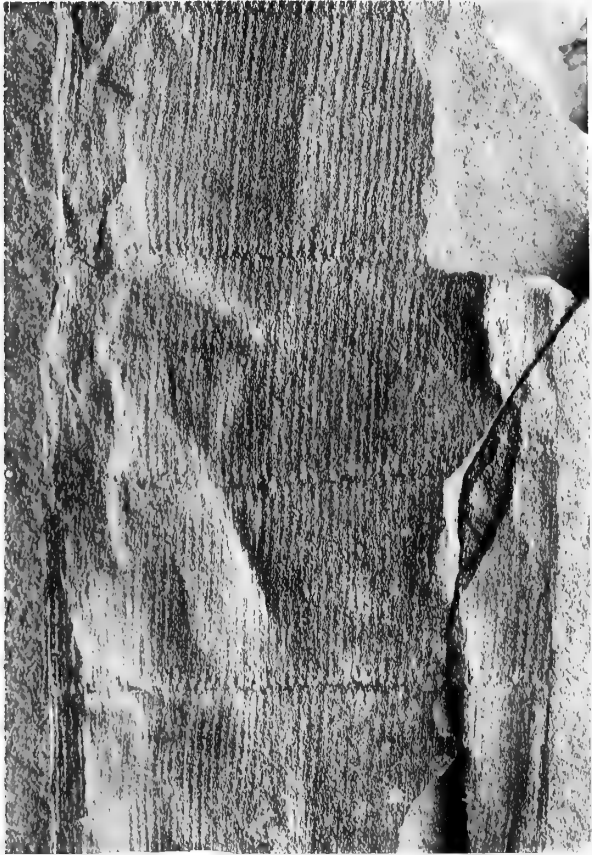


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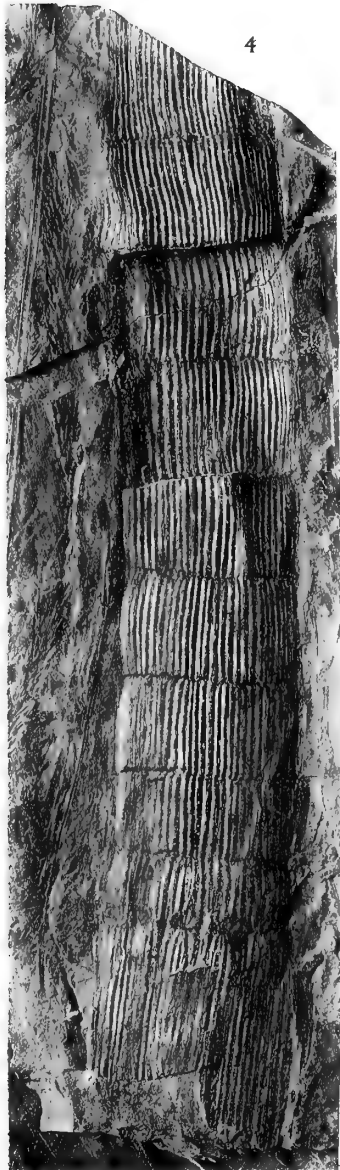




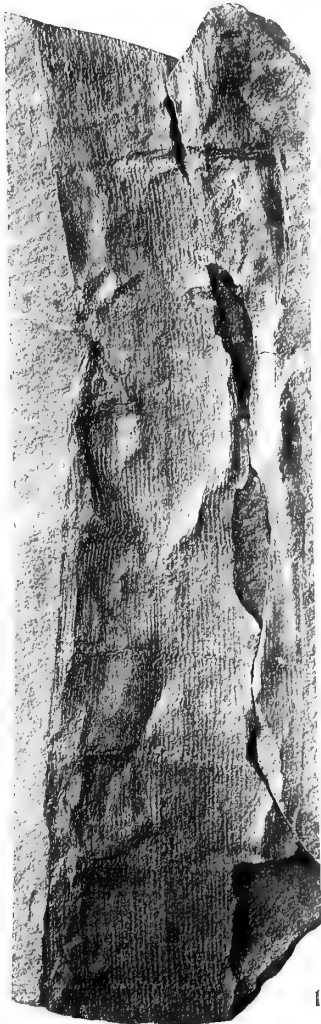
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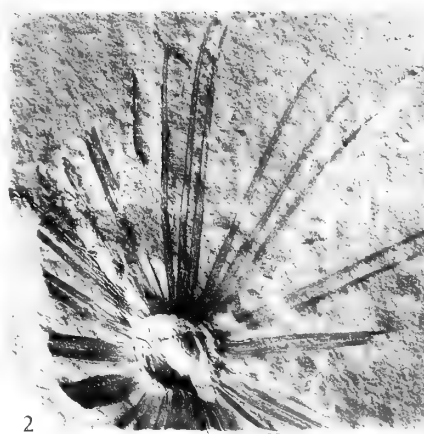
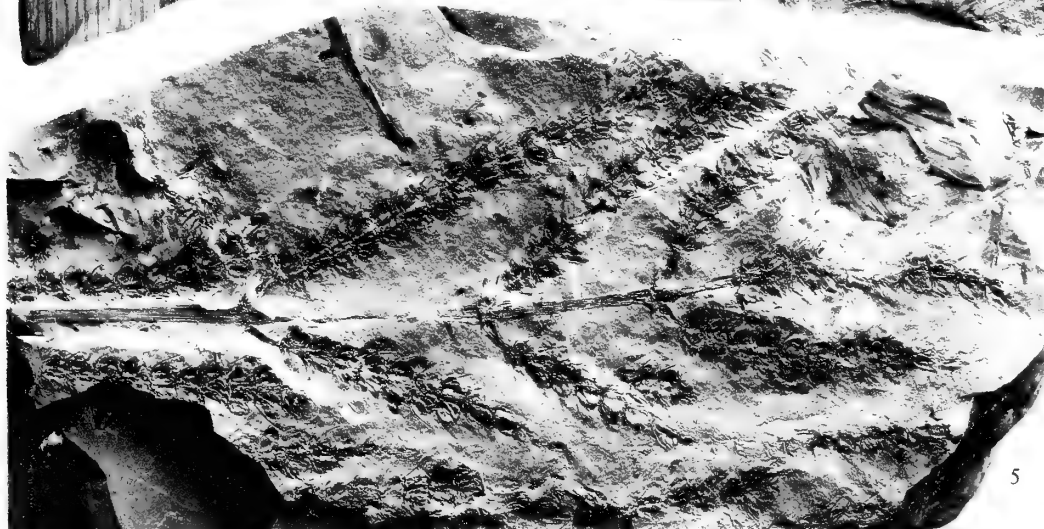
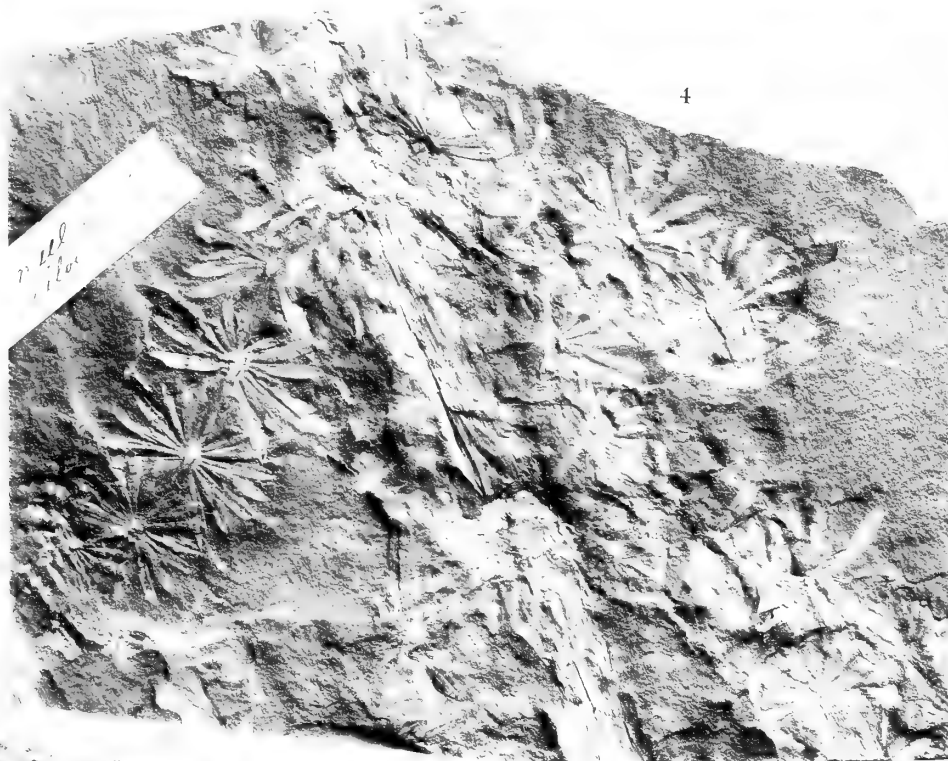
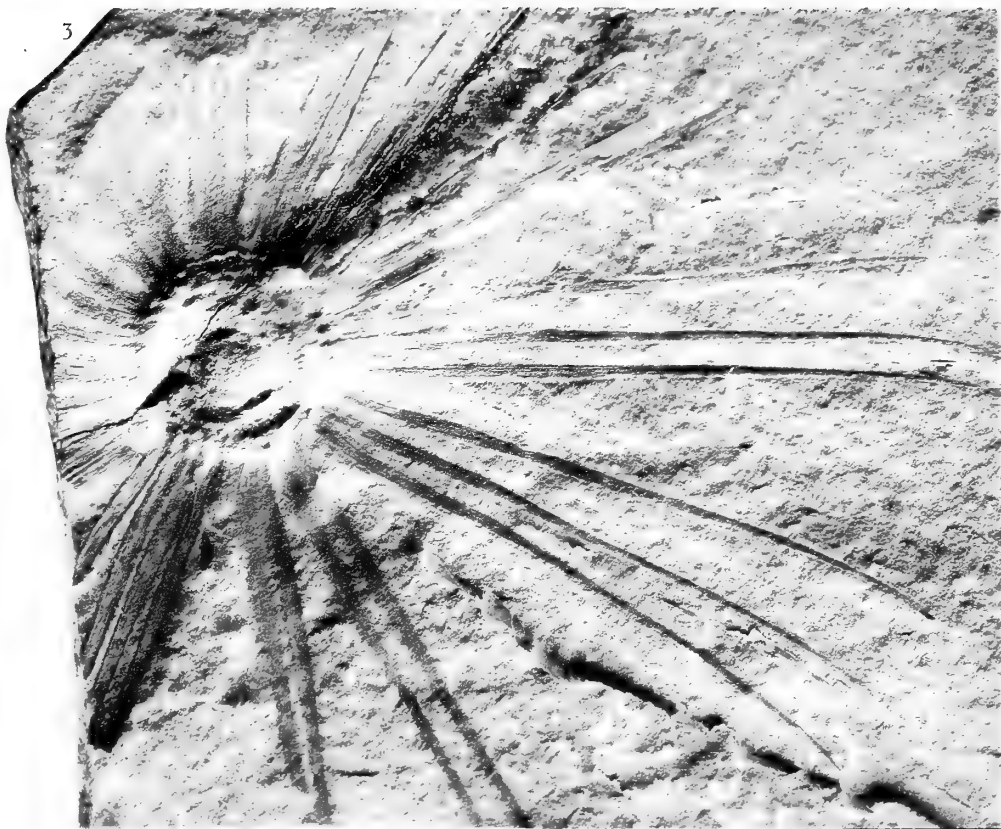
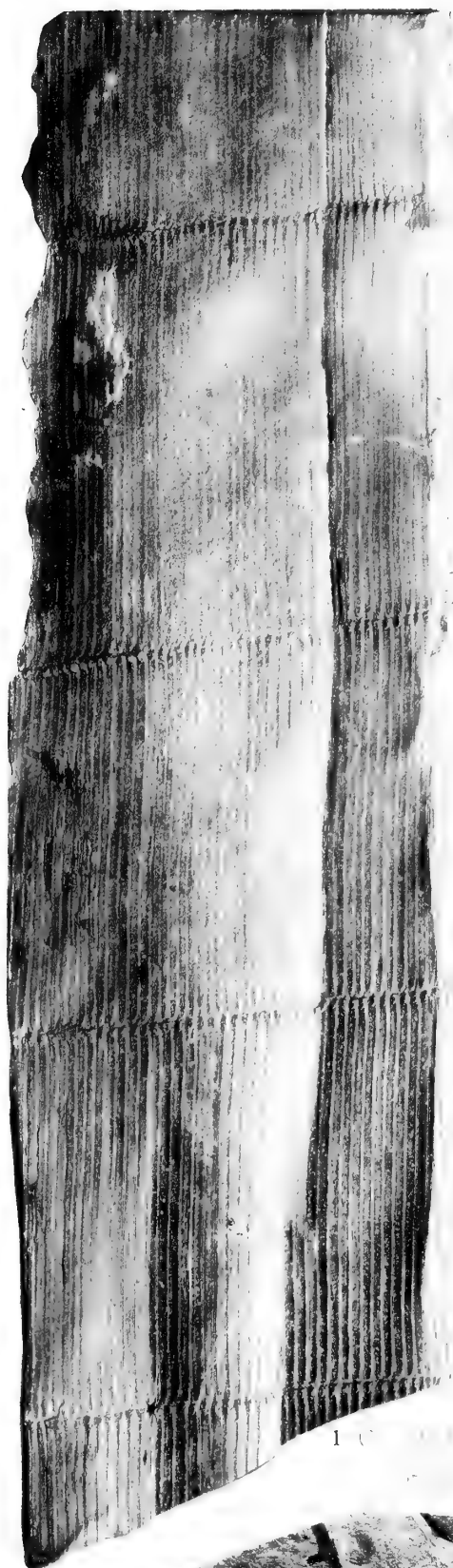
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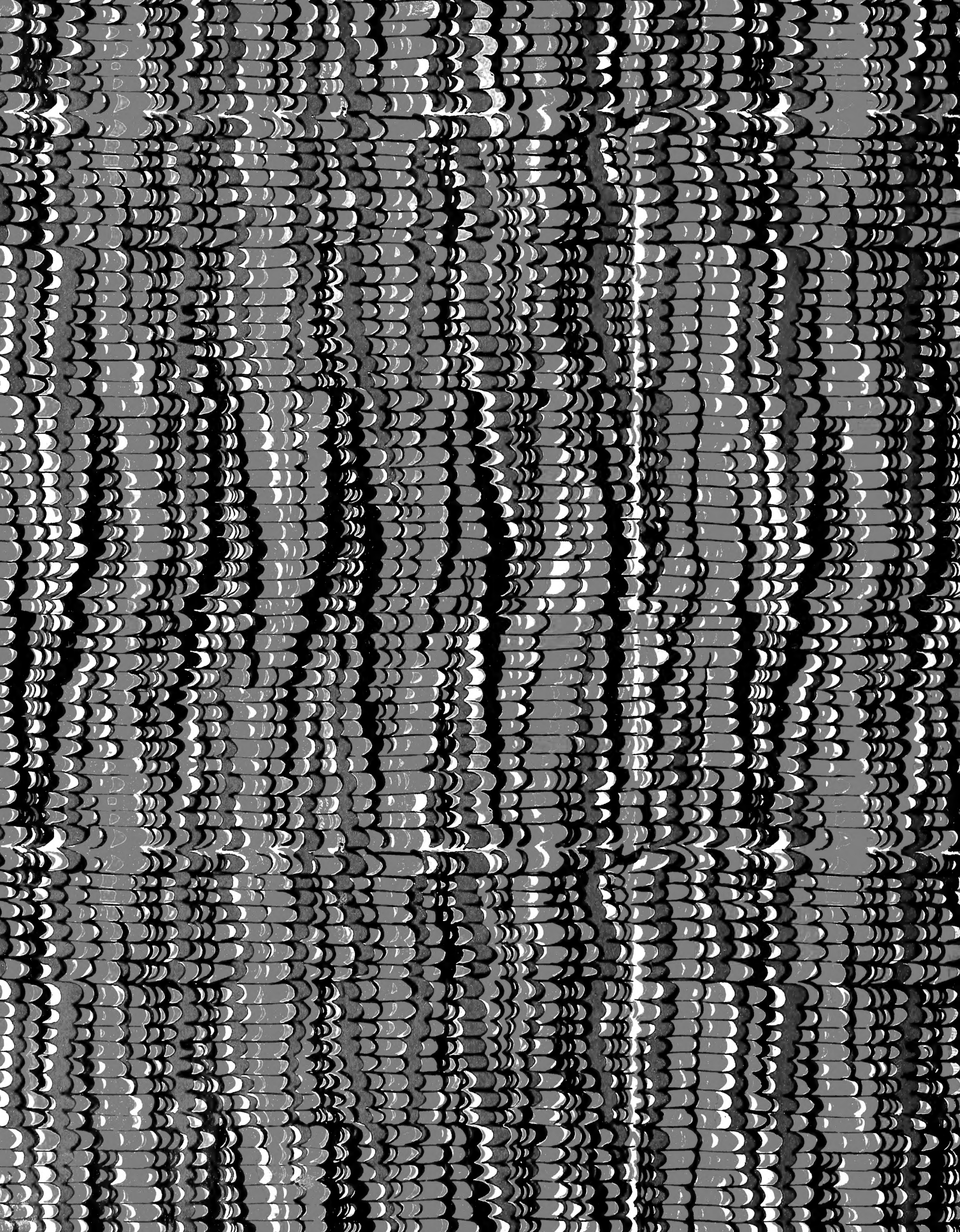




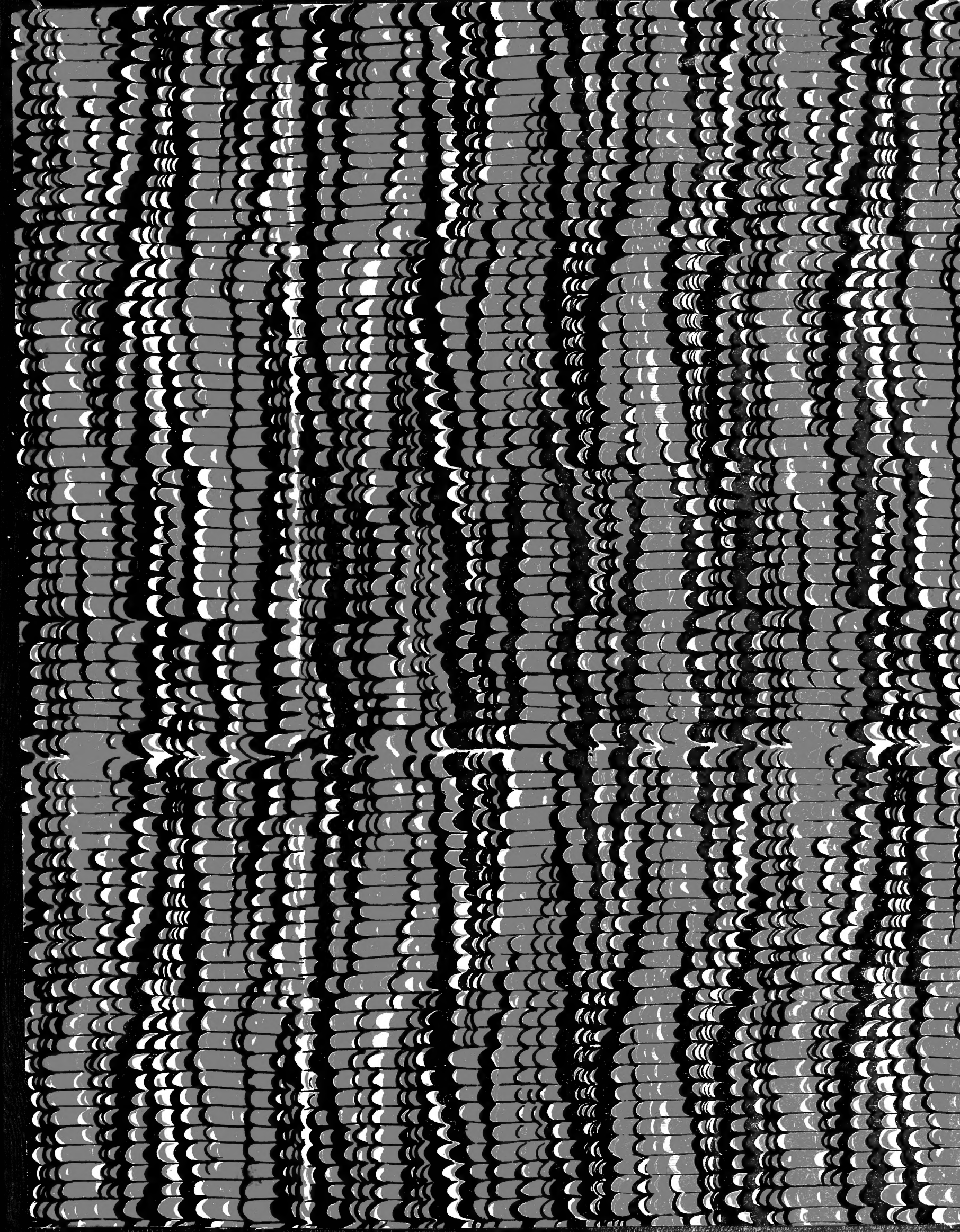














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